No.01

Oki Data CONFIDENTIAL

C810/C801(*1)

Maintenance Manual

(ODA/OEL/AOS)

[Rev.2]

(*1)C801:OEL only model

Related drawings

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44072901TR	C810 RSPL

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PREFACE

This manual explains the maintenance methods for the C810dn/C801dn.

The manual has been prepared for use by the maintenance personnel. For operating methods of the C810dn, refer to the corresponding user's manual.

In this manual, the printer name may be described as follows.

C810dn/C801dn → C810/C801

Note!

- The contents of this manual are subject to changes without prior notice.
- Despite that exhaustive efforts were made in preparing the manual to make it accurate, it still may contain errors. Oki Data will not hold itself liable for any damage that results or is claimed to have resulted from repair, adjustment, or modification of the printer conducted by the user using this manual.
- The parts employed in the printer are so delicate that they may be damaged if not treated properly. Oki Data strongly recommends that the maintenance of the printer be undertaken by Oki Data's registered maintenance personnel.
- Work after eliminating static electricity.

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1. CONFIGURATION

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1.1 System Configuration

Figure 1-1 represents the system configuration of the printer.

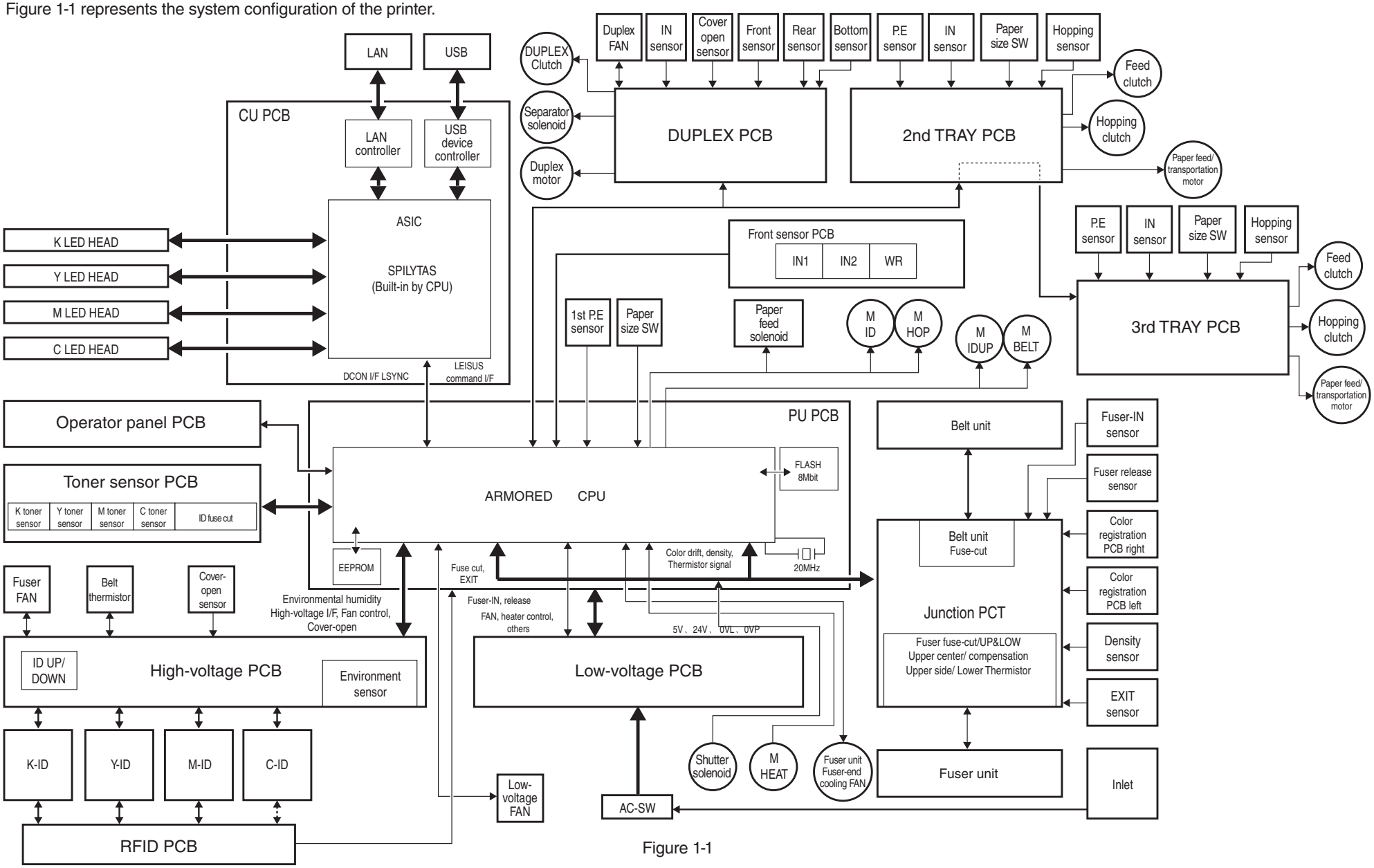


Figure 1-1

1.2 Printer configuration

The internal part of the printer is composed of the following sections:

- Electrophotographic processing section
- Paper paths
- Control sections (CU sect./PU sect.)
- Operator panel
- Power supply sections (High-voltage sect./low-voltage sect.)

Figure 1-2 represents the configuration of the printer.

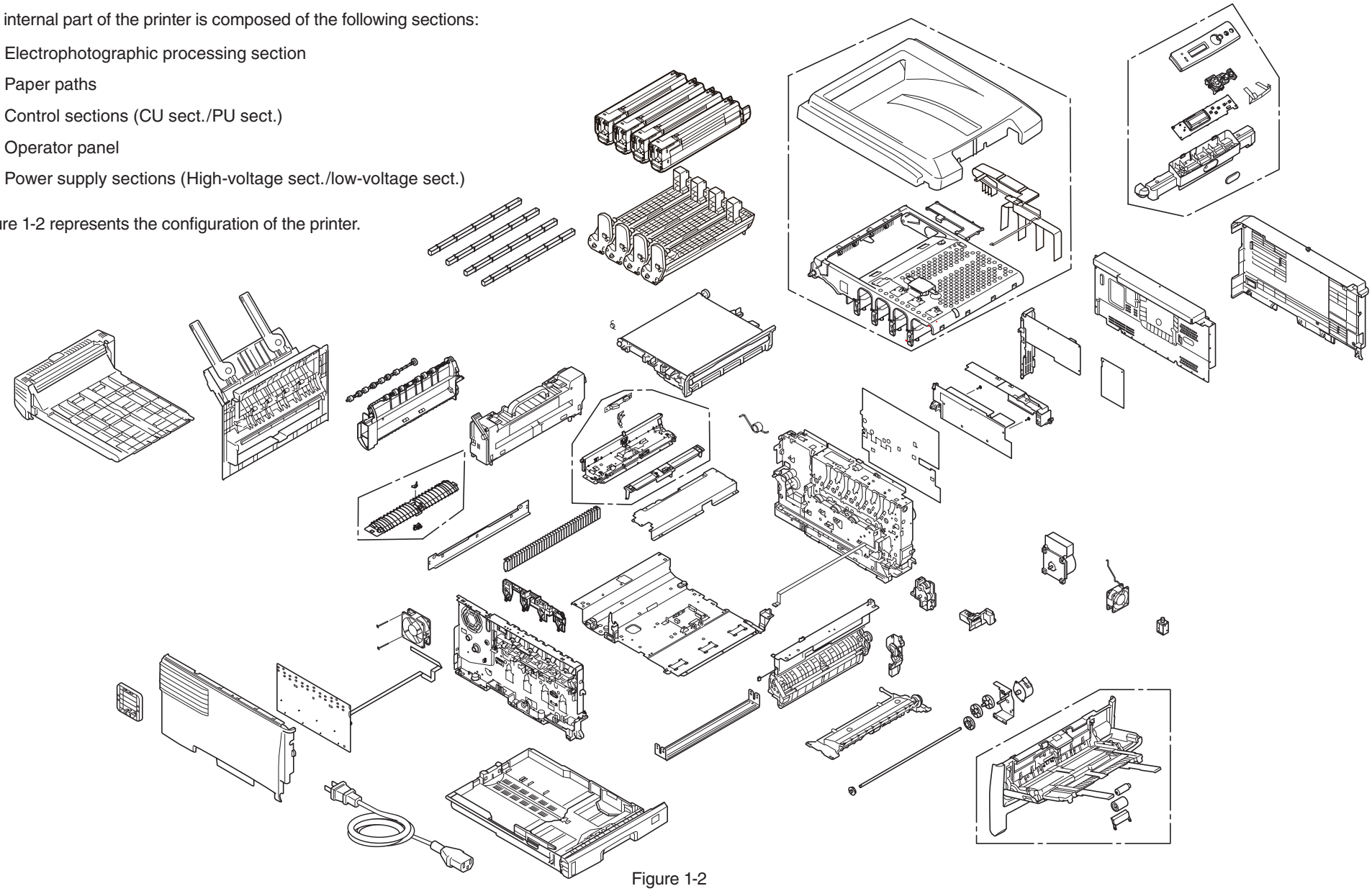
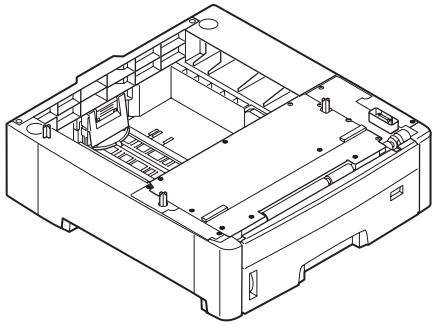


Figure 1-2

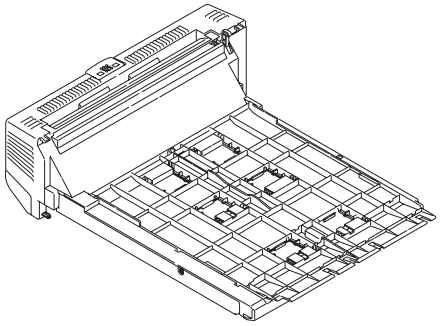
1.3 Composition of optional items

The following optional items are available for the printer.

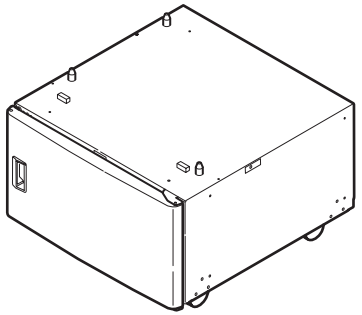
(1) Expanded tray



(2) Duplex-Unit



(3) Cabinet with wheels



Model name : CAB-S1

1.4 Specifications

Division	Item	Contents
External dimensions	Width	485mm
	Depth	593mm
	Height	345mm
	Mass	Approx. 40kg
Print width	Print width	A4 Landscape
Print speed	Engine speed (A4 portrait)	30PPM (Color:C810), 22PPM(Color:C801) 32PPM (Mono:C810/C801)
Print start	First print time (Tray1)	9.5 sec (Mono:C810/C801) 10 sec (Color:C810), 11.5 sec (Color:C801) (A4 LEF)
	Warm-up time	90 sec
	Low-noise mode	Not applicable
Resolution	LED head	600 dpi
	Max. input resolution	600 x 1200 dpi
	Output resolution	True 600 x 1200 dpi True 600 x 600 dpi
	Gradation	4-gray scale 600x600 dpi
	Econo-mode	Toner-saving by decreasing lightness
CPU	Core	Equivalent to Power PC405
	I-cache/ D-cache	16KB/ 16KB
	Clock	200MHz
	Bus width	32bit
RAM	Resident	128MB
ROM	Program + font	4MB

Division	Item	Contents	
Power consumption	Power input	120VAC ± 10%	230VAC± 10%
	Power-save mode	15W or less	
	Idle	200W (Average)	
	Normal operation	570W (Depends on the use environment)	
	Peak	1350W	
Operating environment (Temperature)	When operating	10˚C~32˚C, 17˚C~27˚C (Full-color print quality guarantee temperature)	
	When not operating	0˚C~43˚C, Power off	
	When stored (for max. 1 yr.)	-10˚C~43˚C, With drum and toner	
	When transported (for max. 1 mo.)	-29˚C~50˚C, With drum, but no toner	
	When transported (for max. 1 mo.)	-29˚C~50˚C, With drum and toner	
Operating environment (Humidity)	When operating	20%~80%, 50%~70% (Full-color print quality guarantee humidity) Max. wet-bulb temp.: 25˚C	
	When not operating	10%~90%, Max. wet-bulb temp.: 26.8˚C, with power off	
	When stored	10%~90%, Max. wet-bulb temp.: 35˚C	
	When transported	10%~90%, Max. wet-bulb temp.: 40˚C	

Division	Item	Contents
Duration	Printer life	5 years or 600,000 pages
	Print duty (M=L/12, A=L/12/5)	Max. 50,000 pages / mo. Average 10,000 pages / mo.
	MTBF (2.3% duty)	Not applicable
	MPBF	100,000 pages
	MTTR	Within 20 minutes
	Toner life (ISO.IEC 19798)	Enclosed toner: 2300 pages (Black), 2300 pages (color)
		Standard:8,000 pages (black), 8,000 pages (color):C810 7,000 pages (black), 7,300 pages (color):C801 S type : 2,500 pages (black), 2,500 pages (color)
	Image drum life	Approx. 20,000 pages (With 3 pages / job) Approx. 11,000 pages (With 1 page / job) Approx. 27,000 pages (When printed continuously) Drum counter automatically reset
	Transfer belt life	80,000 pages (A4 portrait size, with 3 pages / job), counter automatically reset
	Fuser unit life	100,000 pages (A4 size), counter automatically reset
Operation noise	In operation	54dBA (ISO 7779 front) (when the optional tray is not installed)
	On standby	37dB (ISO 7779 front)
	Power-save mode	Background level
Paper handling	Paper capacity (1st tray)	Legal/universal cassette: 300 sheets (70kg)
	Paper capacity (Expanded tray)	Legal/universal cassette (Optional): 530 sheets (70kg)
	Paper capacity (Manual/ auto)	Standard multi-purpose tray: 100 sheets of paper (70kg) or 10 envelopes

Division	Item	Contents
Paper handling	Delivery	250 sheets (70kg) face-down/ 100 sheets (70kg) face-up in tray
	Duplex	Standard
Paper size		A3, A4, A5, B5, A6*, Letter, Legal13/13.5/14, Executive, Postcard**, Double postcard**, Custom***, Envelope (DL, C4, C5, Com-10, Cho-3, You-0, You-4, Kaku2, Kaku3) *: A6 cannot be used in Tray 2/ 3. **: Postcards and double postcards can be used in MPT only. ***: For Custom, available size depends on a tray. The max. length is 1320mm.
Min. paper size	Tray1	A6
	Tray 2 / 3 (Options)	A5
	MPT	Postcard
Media weight	Tray 1	64g/m2 ~120g/m2
	Tray2/ 3 (options)	64g/m2 ~176g/m2
	MPT	64g/m2 ~220g/m2
Operator panel	LCD	16 characters in 2 line (Roman alphabet/Japanese kana) No paper size indicated
	LED (color)	2 (Green x1, dark amber x1)
	Switch	6
Status switch/ sensor	Paper out	Yes
	Paper low	None
	Toner low	Yes (Y, M, C, K)
	Cover open	Yes
	Fuser unit temp.	Yes
	Paper size	Yes (Manual operation)
	Stacker full	None

Division	Item	Contents
Commu-nication interface	Standard (On PCB)	• Hi-Speed USB • Ethernet
	Option	None
	Input/ output switch	Auto
Emulation	Standard	Hiper-C
	Emulation switch	None
Font	Bit-map Type face	None
	Scalable font	None
	Rasterizer	None
	Bar code	None
	OCR	None
	Japanese PCL font	None
	Japanese PS font	None
Optional item (Detachable)	RAM	None
	2.5” IDE HDD User-installable	None
	Tray mechanism	2nd/ 3rd tray mechanism
	Cassette	Universal (530 pages)
	Duplex print unit	Yes
	Long paper supporter	None
	Others	Not applicable
Factory default	OEL/ODA	GDI model

Division	Item	Contents
Other	USB-IF logo	Provided
	Windows logo	Provided
	Operation with UPS or inverter	Proper operation by use of a UPS (uninterruptible power supply) or an inverter is not guaranteed. Do not use a UPS and an inverter.

1.5 Interface specifications

1.5.1 USB interface specifications

1.5.1.1 Outline of USB interface

(1) Basic specifications

USB (Hi-Speed USB supported)

(2) Transmission mode

Full speed (Max. 12Mbps ± 0.25%)

High speed (Max.480Mbps ± 0.05%)

(3) Power control

Self power device

1.5.1.2 USB interface connectors and cables

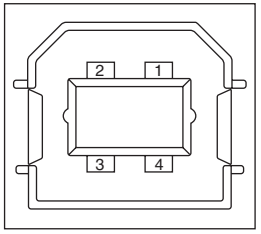
(1) Connector

- Printer side: B-receptacle (Female)

  Upstream port

  Product equivalent to UBR24-4K5C00 (Made by ACON)

Connector pin assignment



- Cable side: B-plug (Male)

(2) Cables

Cable length : USB2.0 type cables 5 meters long or shorter. (Cables 2 meters long or shorter are recommended).

(Shielded cable lines shall be used.)

1.5.1.3 USB interface signals

	Signal name	Function
1	Vbus	Power supply (+5V)
2	D-	For data transfer
3	D+	For data transfer
4	GND	Signal ground
Shell	Shield	

1.5.2 Network interface specifications

1.5.2.1 Outline of network interface

Basic specifications

Network Protocols

TCP/IP specification — Network layer

ARP, IP, ICMP

Transport layer

TCP, UDP

Application layer

LPR, Port 9100, FTP, HTTP, IPP, SNMPv1, TELNET, DHCP/BOOTP, DNS, DDNS, WINS, UPnP, Bonjour, SNTP, SMTP, Windows Rally (WSD Print, LLTD)

NetBEUI: SMB, NetBIOS

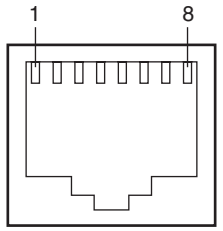
1.5.2.2 Network interface connectors and cables

(1) Connectors

100 BASE-TX / 10 BASE-T (Automatically switched, not usable simultaneously)

Connector pin assignment

(2) Cables



RJ-45 connectorized non-shielded twisted-pair cable (Category 5 recommended)

1.5.2.3 Network interface signals

Pin No.	Signal name	Direction	Function
1	TXD+	FROM PRINTER	Transmitting data +
2	TXD-	FROM PRINTER	Transmitting data -
3	RXD+	TO PRINTER	Receiving data +
4	–	–	Not in use
5	–	–	Not in use
6	RXD-	TO PRINTER	Receiving data -
7	–	–	Not in use
8	–	–	Not in use

2. DESCRIPTION OF OPERATION

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2.1 Electrophotographic process mechanism

(1) Electrophotographic process

The electrophotographic process is explained briefly below:

1. Charging

   A voltage is applied to the CH roller to electrically charge the surface of the OPC drum.

2. Exposure

   The LED head radiates light onto the charged OPC drum in accordance with the image signal. The electric charge of the radiated part of the OPC drum surface attenuates depending on the intensity of the light, thus forming an electrostatic latent image on the OPC drum surface.

3. Development

   Charged toner adheres to the electrostatic latent image of the OPC drum by electrostatic power, and forms a visible image on the OPC drum surface.

4. Transfer

   Paper is placed over the OPC drum surface and an electric charge is applied to it from the backside by the transfer roller, so that the toner image is transferred to the paper.

5. Drum cleaning

   The drum cleaning blade removes toner remaining on the OPC drum after the transfer.

6. Belt cleaning

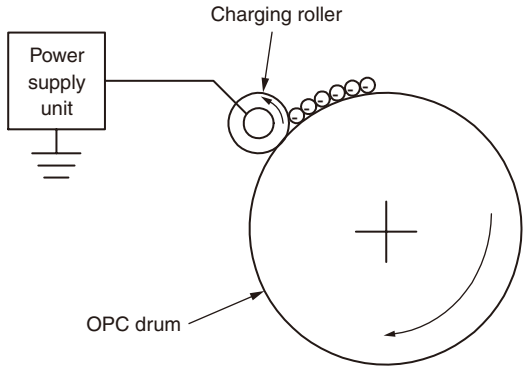
   The belt cleaning blade removes toner remaining on the belt.

7. Fusing

   Heat and pressure are applied to the toner image on the paper to promote its fusion.

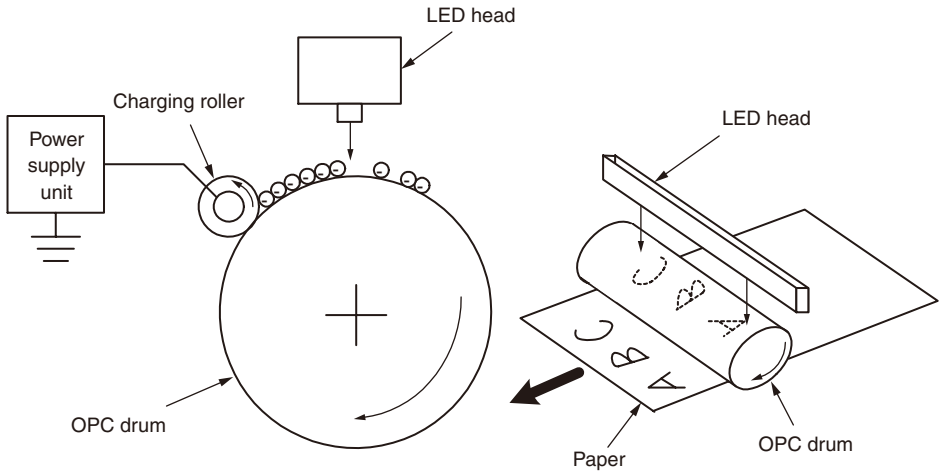
(2) Charging

A voltage is applied to the charging roller, which is placed in contact with the OPC drum surface, to charge the OPC drum surface.



(3) Exposure

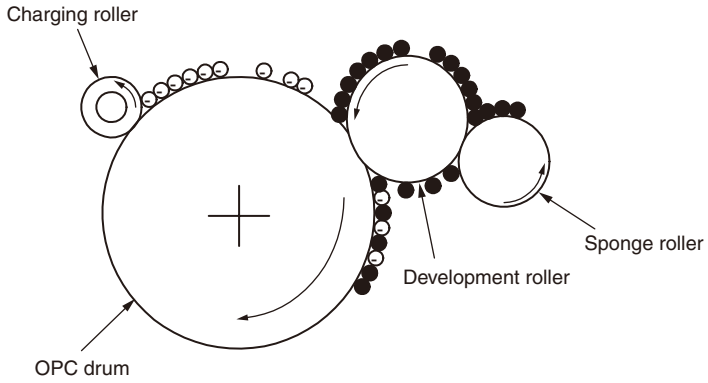
The light emitted from the LED head is radiated onto the charged surface of the OPC drum. The charge of the radiated part of the OPC drum attenuates according to the intensity of the light, forming an electrostatic latent image on the OPC drum surface.



(4) Development

Toner adheres to the electrostatic latent image on the drum surface, thereby turning the electrostatic latent image into a toner image.

1. The sponge roller allows the toner to stick to the development roller.

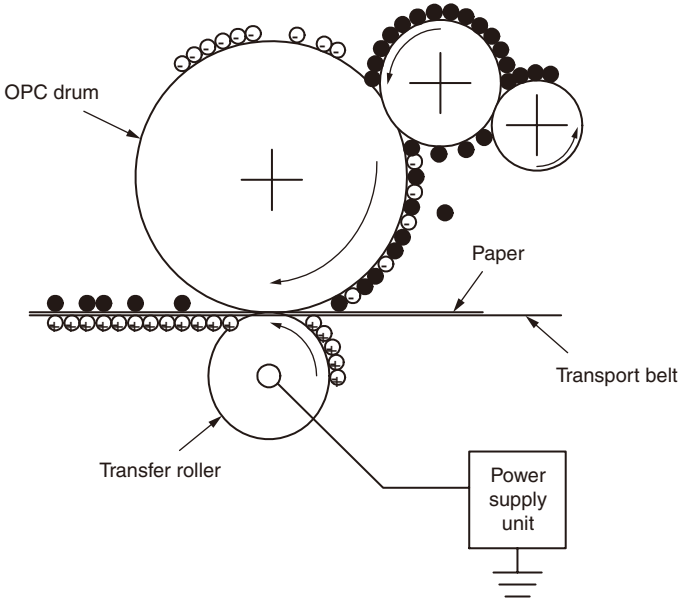


2. The electrostatic latent image on the OPC drum surface is turned into a visible image by the toner.

(5) Transfer

A sheet of paper is placed over the OPC drum surface, and an electric charge is given to the paper from its backside by the transfer roller.

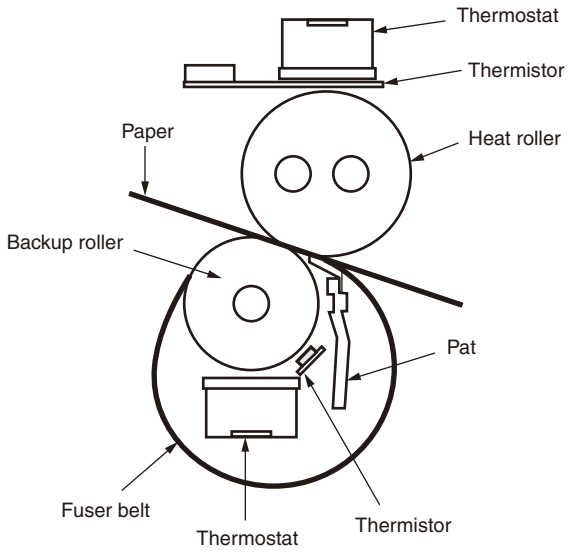
When a high voltage is applied to the transfer roller from the power source, the charge induced on the transfer roller moves on to the surface of the paper through the contact part between the transfer roller and the paper, the toner being attracted to the paper surface from the OPC drum surface.



(6) Fusing

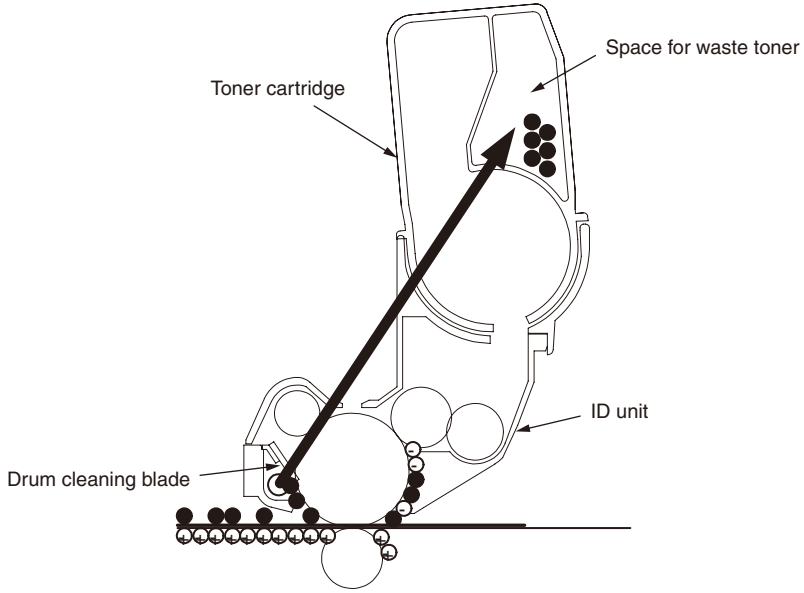
The toner image transferred on the paper is fused on the paper by heat and pressure when the paper passes through the heat roller and backup roller.

The heat roller is heated by 800W and 350W internal halogen lamps, and the backup roller is heated by a 50W internal halogen lamp. The fuser temperature is controlled according to the sum of the temperature that is not contacted with the thermistor ground against the heat roller surface and the temperature that is detected with the thermistor ground on the backup roller surface. There is also a thermostat for safety purposes. When the heat roller temperature rises above a certain temperature, the thermostat opens and shuts down the power supplied to the heater. The backup roller unit is pressed against the heater with a press spring on both sides.



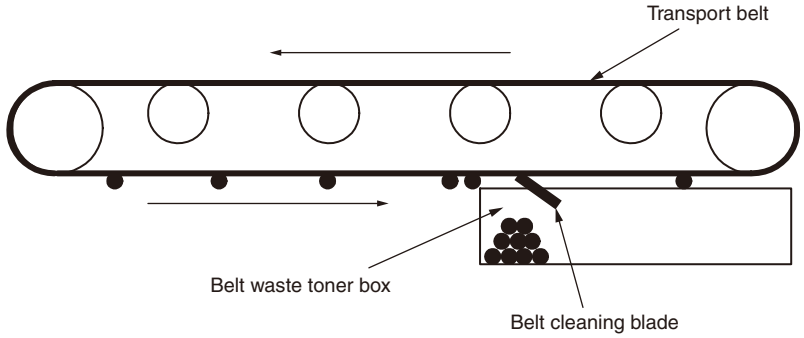
(7) Drum cleaning

Unfixed toner remaining on the OPC drum is removed by the drum cleaning blade and collected into the waste toner area of the toner cartridge.



(8) Belt cleaning

Toner remaining on the transfer belt is scraped off by the belt cleaning blade and collected into the waste toner box of the transfer belt unit.

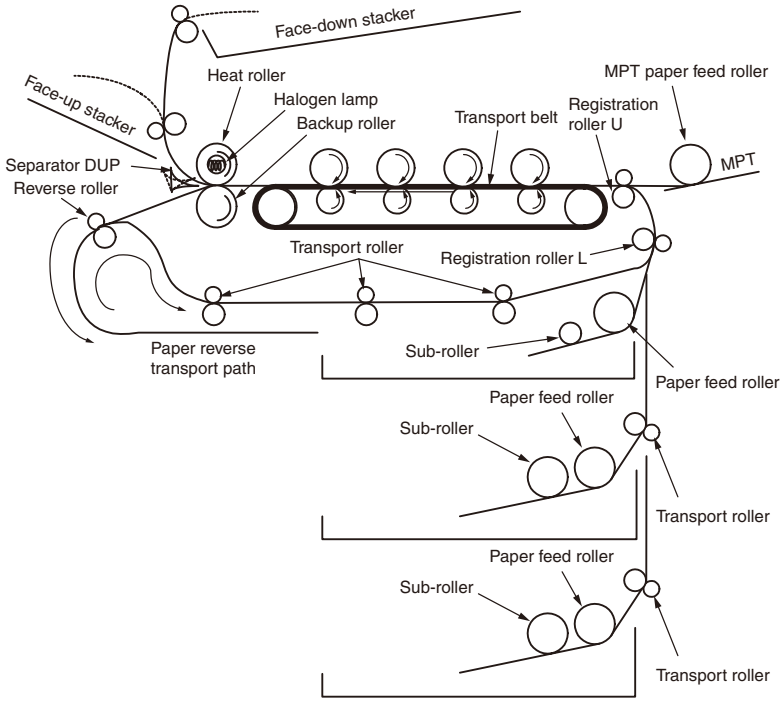


2.2 Printing process

The paper fed from Tray1, Tray2 or Tray3 is carried by the paper feed roller, the registration roller L, and the transport roller. When the paper is fed from the MPT, it is carried by the MPT paper feed roller and the registration roller U. Then, an unfixed toner image is created on the paper transported onto the belt sequentially through the electrophotographic process of KYMC. Thereafter, the image is fixed under heat and pressure as the paper goes through the fuser unit. After the image has been fixed, the paper is ejected to a face-up stacker or to a face-down stacker, according to the outputting method selected by opening or closing of the face-up stacker.

While the above refers to the one-sided print operation of the printer, its operation in two-sided print will be explained below.

When two-sided print is conducted, the paper that has passed through the fuser unit following first one-sided print is sucked into the Duplex unit by the separator DUP. After entering the paper reverse transport path, the paper is carried from there to the inside of the Duplex unit by the inverting operation of the reverse roller. Then, after passed through the Duplex unit by the transport roller that is located on the transport path inside the Duplex unit, the paper is fed along the paper feed route of the Duplex unit to eventually merge the same route that comes from the tray. From here on, the same operation as that of one-sided print of paper fed from the tray takes place.



(1) Paper fed from 1st Tray

1. As illustrated in Figure 2-1, when the solenoid is ON, the registration motor rotates (counterclockwise), transporting the paper until the IN1 sensor comes ON. (When the solenoid is ON, the paper feed roller is driven.)
2. After causing the IN1 sensor to come ON, the paper is further carried over a certain distance to finally hit the registration roller L. (This corrects skew of the paper.)
3. As shown in Figure 2-2, the solenoid is turned OFF, and the paper is carried by the registration roller L. (When the solenoid is OFF, the registration roller L is driven.)

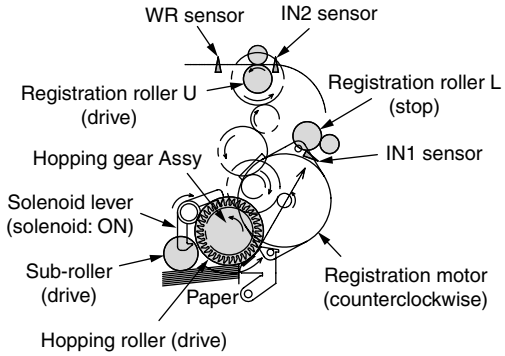


Figure 2-1

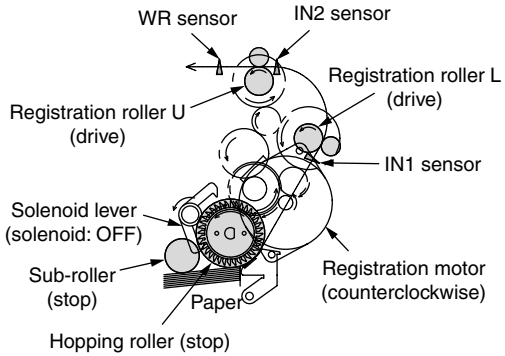


Figure 2-2

(2) Paper fed from MPT

1. As illustrated in Figure 2-3, when the solenoid is OFF, the registration motor rotates (clockwise), transporting the paper until the IN2 sensor comes ON. (As the registration motor rotates clockwise, the MPT paper feed roller is driven.)
2. After causing the IN2 sensor to come ON, the paper is further carried over a certain distance to finally hit the registration roller U. (This corrects skew of the paper.)
3. As shown in Figure 2-4, the registration motor rotates (counterclockwise) to let the registration roller U transport the paper. (As the registration motor rotates counterclockwise, the registration roller U is driven.)

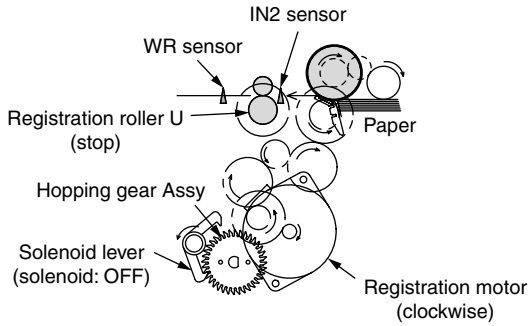


Figure 2-3

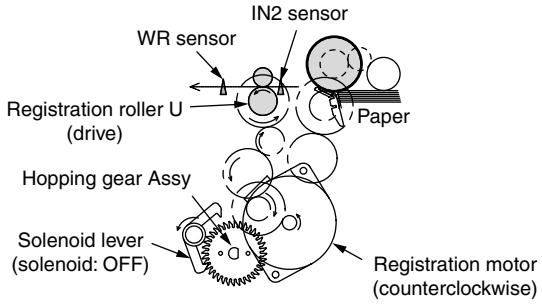


Figure 2-4

(3) Transport belt

1. As the transport belt motor rotates in the direction of the arrow, the transport belt is driven. The belt unit consists of one transport roller placed immediately underneath each color drum, with a transport belt inserted in between them.

   As the specified voltage is applied, the transport belt and the transport rollers carry the paper on the transport belt to the fuser unit as transferring the toner images present on each color drum to the paper.

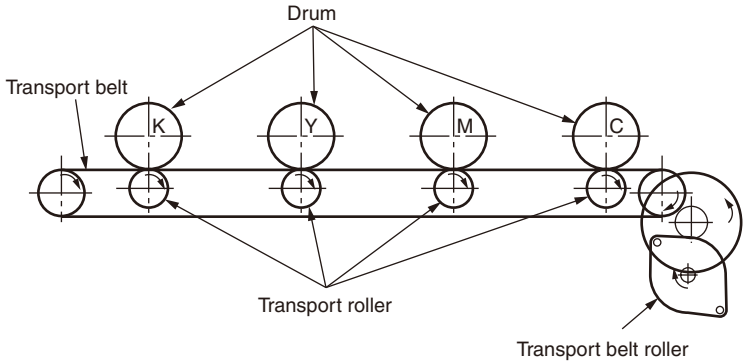


Figure 2-5

(4) Up/down-motions of ID units

1. The up/down-motions of the ID units take place driven by the lift-up motor.
2. Figure 2-6 shows the motions of the different ID units when the printer is operated for color print. As the lift-up motor rotates (clockwise), the lift-up link slides to the left, causing the ID units to come down, as can be seen in Figure 2-6. Namely, the printer is readied for color print.
3. Figure 2-7 shows the motions of the different ID units when the printer is operated for monochrome print. As the lift-up motor rotates (counterclockwise), the lift-up link slides to the right, causing the ID units to go up, except for the K-ID unit, as can be seen in Figure 2-7. Namely, the printer is readied for monochrome print.

ID unit operations during color printing

C-ID unit	Down
M-ID unit	Down
Y-ID unit	Down
K-ID unit	Down

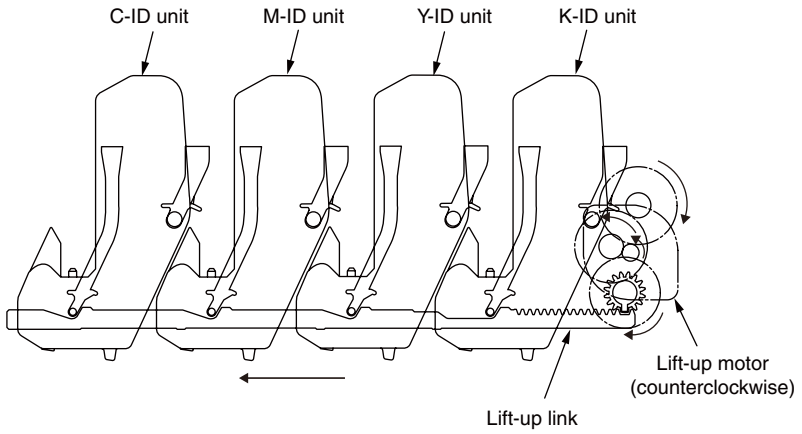


Figure 2-6

ID unit operations during monochrome printing

C-ID unit	Lift up
M-ID unit	Lift up
Y-ID unit	Lift up
K-ID unit	Down

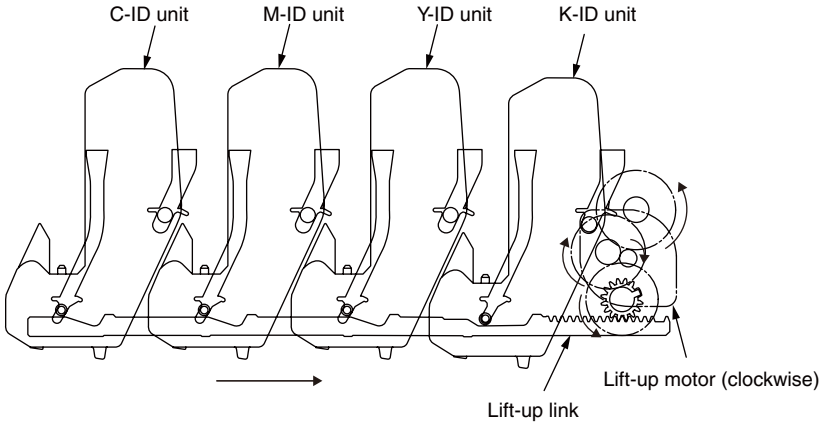


Figure 2-7

(5) Fuser unit and paper ejection

1. As illustrated in Figure 2-8, the fuser unit and the eject roller are driven by the DC motor. As the fuser motor rotates (counterclockwise), the heat roller rotates. This roller fixes toner images by heat and pressure.
2. At the same time, the eject rollers rotate and eject printouts.

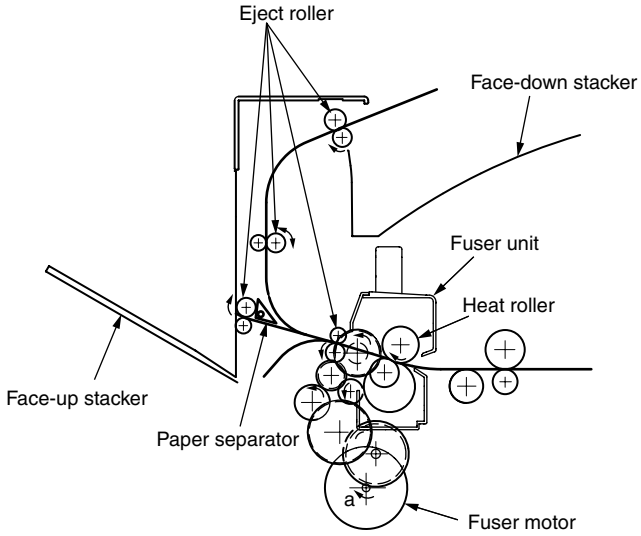


Figure 2-8

(6) Cover-opening motion of the color registration sensor and the density sensor

1. As illustrated in Figure 2-9, when the solenoid is energized, the link lever moves, causing the cover of the color registration sensor and the density sensor to open.
2. As the solenoid is de-energized, the spring pushes the cover, causing the cover of the color registration sensor and the density sensor to close.

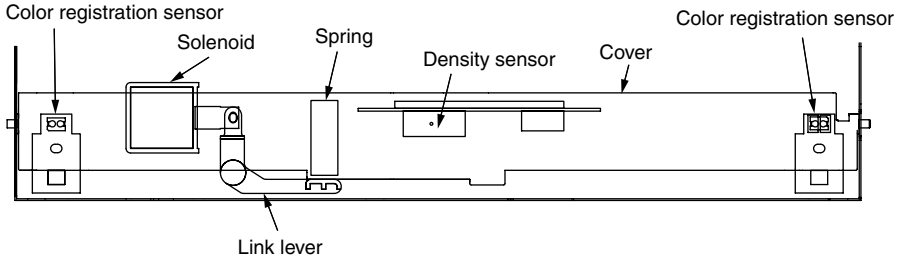


Figure 2-9

Outline of color registration correction

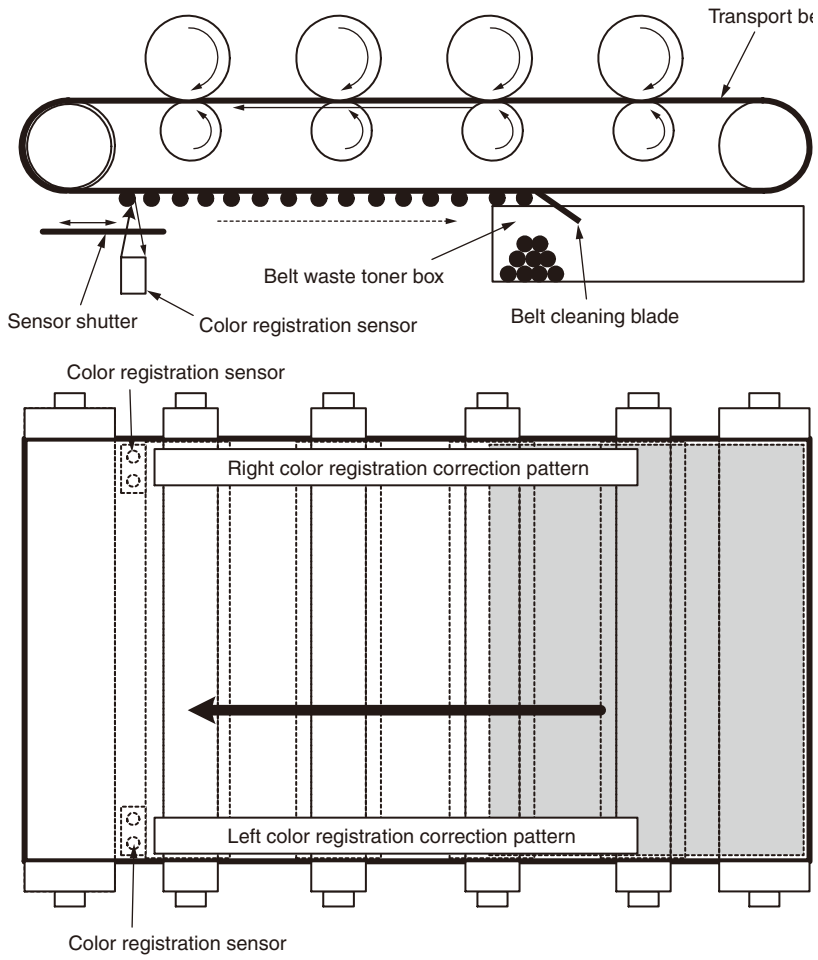
The color registration is corrected by reading correction patterns that are printed on the belt with the color registration sensors located inside the sensor shutter under the belt unit. These sensors are used to detect and correct color registration.

Automatic start timing of color registration correction

- At power-on
- When the cover is closed after it is opened for five seconds or more
- When 400 pages or more have been printed after the previous correction

A correction error may be issued due to an inadequate toner amount of the pattern generated, a sensor stained with toner, deficient opening/closing of the shutter, or for other reasons. However, even if an error is issued, it is not indicated on the operator panel.

Therefore, forcible color registration correction will have to be performed in the self-diagnostic mode (section 5.3.2.6) to check the error indication.



Error checking methods and remedial methods

The color registration correction test function among the other self-diagnostic functions is employed to check errors. (Section 5.3.2.6)

Remedial methods against different errors

- CALIBRATION (L or R), DYNAMICRANGE (L or R)

  Check 1: If the above indication appears, check the connected state of the sensor cable (FFC).
  If the connected state is found abnormal, restore it to the normal state.

  Check 2: Check to see whether the sensor surface is stained with toner, paper dust or any other foreign matter.
  If it is found stained, wipe it clean.

  Check 3: Check to see whether the sensor shutter opens and closes normally, by the MOTOR & CLUTCH TEST of the self-diagnostic function. If the shutter operates imperfectly, replace the shutter unit.
  If no problem was found by the checks 1 through 3, there is a problem with the circuit.

  Replace each of the color registration sensor PCBs (PRC PCB), the relay board (P6Y PCB), the PU board (PU PCB) and the cable one by one and check that no error will occur again.

- BELT REFLX ERR

  Check 4: If this indication appears, check the cleaned state of the toner remaining on the belt surface, in addition to making the above checks 1, 2 and 3. Take out the belt unit, turn the drive gear located on the left rear side, and ensure that the belt surface has been cleaned thoroughly.

  If cleaning is not achieved perfectly and there still remains toner on the belt surface after the drive gear has been turned, replace the belt unit.

- (Y or M or C) LEFT, (Y or M or C) RIGHT, (Y or M or C) HORIZONTAL

  Check 5: If the above indication appears, check to see whether the toner is running short, based on an NG-issuing color.

  Replace the toner cartridge, as needed.

Outline of density correction

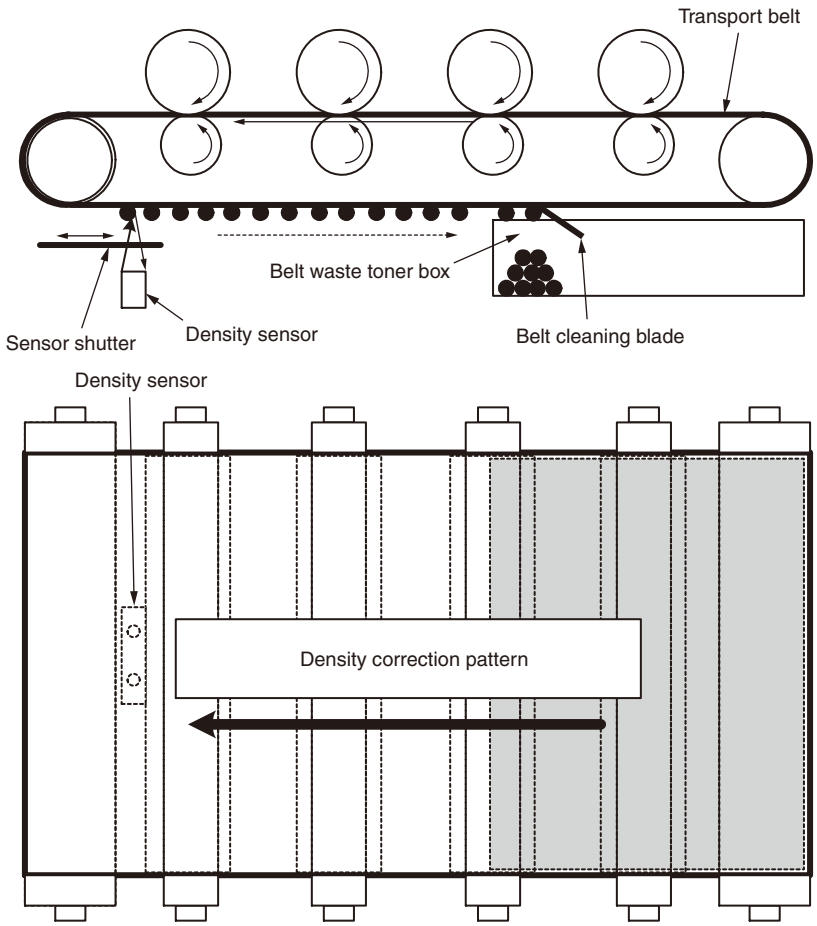
The density is corrected by reading the correction pattern that is printed on the belt with the density sensor located inside the sensor shutter under the belt unit.

Automatic start timing of density correction:

- At power-on
- When the ID count after the previous correction exceeds 500

A correction error may be issued due to an inadequate toner amount of the pattern generated, a sensor stained with toner, deficient opening/closing of the shutter, or for other reasons.

However, even if an error is issued, it is not indicated on the operator panel. Therefore, forcible density correction will have to be performed in the self-diagnostic mode (section 5.3.2.7) to check the error indication.



Error checking methods and remedies

The density correction test function among the other self-diagnostic functions is employed to check errors. (Section 5.3.2.7)

Remedial methods against different errors

- CALIBRATION ERR, DENS SENSOR ERR

  Check 1: If the above indication appears, check the connected state of the sensor cable.

  If the connected state is found abnormal, restore it to the normal state.

  Check 2: Check to see whether the sensor surface is stained with toner, paper dust or any other foreign matter.

  If it is found stained, wipe it clean.

  If no problem was found by the checks 1 and 2, there is a problem with the circuit.

  Replace each of the DENS SENSOR, the relay board (P6Y PCB), the PU board (PU PCB) and the cable one by one and check that no error will occur again.

- DENS SHUTTER ERR

  Check 3: Check to see whether the sensor shutter opens and closes normally, by the MOTOR & CLUTCH TEST of the self-diagnostic function. If the shutter operates imperfectly, replace the shutter unit.

- DENS ID ERR

  Check 4: Take out the ID units and examine them to see if the drum surface has any abnormal toner smudge.

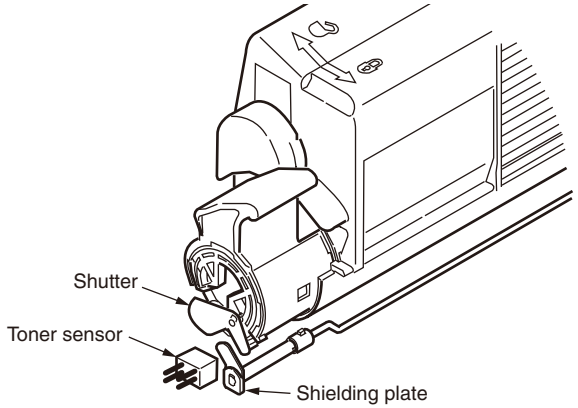
  Replace the LED head (out-of-focus), or replace any ID units with any abnormality.

  To test-operate a new ID unit, use the Fuse Keep Mode of the maintenance menu.

Principle of toner sensor detection

Toner LOW is detected by the toner sensor (Reflection sensor) installed inside the printer. The shielding plate is mounted inside the ID and rotates in synchronization with toner agitation.

Moreover, the ID has a shutter fitted. The shutter is synchronized with the operation lever of the toner cartridge, and the toner sensor can detect that the toner cartridge has been loaded properly. Detection may not take place normally, and a toner sensor error may be issued, if the shield plate or toner sensor is stained with toner, or if the ID unit and toner sensor do not remain exactly opposite to each other in their positions.



Principle of the toner counter

After image data is developed to binary data that the printer can print, the LSI counts the data as a number of print dots. The amount of toner consumed is calculated from that count value, and the remaining amount of toner is thus indicated. As opposed to this, the toner LOW detection by the toner sensor is implemented when the toner amount remaining inside the ID unit physically decreases to below a certain level.

Principles of ID, belt, and fuser counters

ID counter: One count represents the value that results from dividing the amount of rotation of the drum by three when three A4-size sheets are printed continuously.

Belt counter: One count represents the value that results from dividing the amount of rotation of the belt by three when three A4-size sheets are printed continuously.

Fuser counter: One count is registered when paper is shorter than the length of Legal 13-inch paper. When paper is longer than that, the count number is determined by the number of times the Legal 13-inch paper length is exceeded. (Rounding up of decimal fractions)

Counter specifications

	Total page count	MPT page count	Tray 1 page count	Tray 2 page count	Tray 3 page count	Color page count	Monochrome page count
Description	Total number of prints	Number of print media hopped from MPT	Number of print media hopped from Tray 1	Number of print media hopped from Tray 2	Number of print media hopped from Tray 3	Total number of color prints	Total number of monochrome prints
Count method: A4-basis or size independence	Count up after passing the writing sensor	Count up if MPF (MPT) hopping is finished successfully	Count up if Tray 1 hopping is finished successfully	Count up if Tray 2 hopping is finished successfully	Count up if Tray 3 hopping is finished successfully	The number of print media passing the fuser in color mode is counted when each job is finished. (1*) The value is counted on an A4/Letter basis. Refer to A4/Letter conversion table (on the next page).	The number of print media passing the fuser in monochrome mode is counted when each job is finished. (1*) Printing speed for color mode may be applied to monochrome mode. The value is counted on an A4/Letter basis. Refer to A4/Letter conversion table (on the next page).
Operation when paper has jammed	Printed pages are not counted when a paper feed (hopping) jam or a feed jam (380) occurs. Printed pages are counted when any jam except the said jams occurs. Since the total number of prints is counted up when the front end of print media passes the writing sensor, a feed jam (380) is also included into the limits for counted according to its jam type.					Printed pages are not counted if paper jams before passing the fuser. They are counted if prints jam after passing the fuser.	
Operation for Duplex	Front/back count (+2)	Only front count (+1)				The count increases by two. If a color page and a monochrome page exist in a pair of two pages, the color page count increases by two. If no color page exits in a pair of two pages, the monochrome page count increases by two.	
Reset condition	None	None				(1) Replacement of ROM with another one of a different version. (2) Change of the shipping destination (3) Running of MENU RESET of the system maintenance menu (4) Replacement of a CU board	
Value storage destination	PU	PU	PU	PU	PU	CU	CU
Menu/MenuMap output	○	○	○	○	○	○	○
EngineMenuMap output	○	○ (*2)	○ (*2)	○ (*2)	○ (*2)	–	–

*1. The count is not updated if the power is turned off when a paper jam occurs.

*2. EngineMenuMap outputs Engine Menu Print (the first page) and Engine EEPROM Dump Print (the last page), and the number of sheets of paper fed from each tray is described only in the latter one (Dump page only).

A4/Letter conversion table

Each count should increase, in relation to every sheet of paper, by the values in the table below.

Paper size	Simplex	Duplex
LETTER	1	2
EXECUTIVE	1	2
LEGAL14	1	2
LEGAL13.5	1	2
LEGAL13	1	2
TABLOIDEXTRA	2	4
TABLOID	2	4
A3 NOBI	2	4
A3 WIDE	2	4
A3	2	4
A4	1	2
A5	1	2
A6	1	2
B4	2	4
B5	1	2
COM-9	1	2
COM-10	1	2
MONARCH	1	2
DL	1	2
C5	1	2
C4	1	2
HAGAKI	1	2
OUFUKU-HAGAKI	1	2
CUSTOM (LENGTH ≤ 210mm)	1	2
CUSTOM (210 < LENGTH < 900mm)	2	4
CUSTOM (900mm ≤ LENGTH)	4	8
ENVELOPE1 (Choukei 3)	1	2
ENVELOPE2 (Choukei 4)	1	2
ENVELOPE3 (Youkei 4)	1	2
ENVELOPE4 (Envelope A4)	1	2
ENVELOPE5 (Kakugata 2)	2	4
ENVELOPE6 (Kakugata 3)	1	2
ENVELOPE7 (Kakugata 8)	1	2
ENVELOPE8 (Youkei 0)	1	2
INDEXCARD	1	2
BUSINESSCARD1	1	2
BUSINESSCARD2	1	2

3. INSTALLATION

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3.1 Cautions, and do's and don'ts

⚠Warning

- Do not install the printer in any high-temperature location or a near heat source.
- Do not install the printer in a location where chemical reaction may occur (laboratory and the like).
- Do not install the printer in the proximity of inflammable solvents, such as alcohol and paint thinner.
- Do not install the printer within reach of children.
- Do not install the printer on an unstable surface (e.g., on a rickety bench or on a slanting place).
- Do not install the printer in a location with moisture or heavy dust, or in direct sun.
- Do not install the printer in an environment with sea wind or corrosive gas.
- Do not install the printer in a location with heavy vibration.
- In the event that the printer is inadvertently dropped or its cover is damaged, remove the power plug from the power outlet and contact the customer information center.
  Such mishap could lead to an electric shock, fire or injury.
- Do not connect any power cord, printer cable or grounding wire in any other manner than the way specified in the manual. Failure to observe the above could result in fire.
- Do not stick in an object into the vent hole.
  Such action could lead to an electric shock, fire or injury.
- Do not place a glass filled with water or the like on the printer.
  Such action could lead to an electric shock or fire.
- When the printer cover is opened, be careful not to touch the fuser unit.
  It may cause burns.
- Do not throw the toner cartridges or the image drum cartridges into fire.
  Dust explosion could cause burns.
- Do not use a highly combustible spray near the printer.
  It may case a fire because the printer contains parts that get extremely hot.
- In the event that the cover becomes unusually hot, emits smoke, bad smell, or abnormal noise, remove the power plug from the power outlet and contact the customer information center.
  It may lead a fire.

⚠Warning

- If water or any other liquid enters the inside of the printer, remove the power plug from the power outlet and contact Customer Center.
  Fire could break out.
- If someone drops foreign objects such as a clip in the printer, remove the power plug from the outlet and take out the foreign objects.
  It may cause an electric shock, fire, or injury.
- Do not operate or disassemble the printer in any other manner than the way specified in the manual.
  Failure to observe this warning could result in an electric shock, fire or injury.

⚠Caution

- Do not install the printer in a location where its vent hole is blocked.
- Do not install the printer directly on a shag carpet or rug.
- Do not install the printer in a sealed room or other location with poor ventilation or permeability.
- Make sure to ventilate sufficiently when continuously using the printer in a small room for a long time.
- Install the printer away from a strong magnetic field or noise source.
- Install the printer away from a monitor or TV.
- To move the printer, hold both sides of the printer.
- This printer, which weighs approximately 40 kg, should be lifted by two or more people.
- While the printer power is on or the printer is printing, do not come close to the paper exit. Such action could lead to injury.

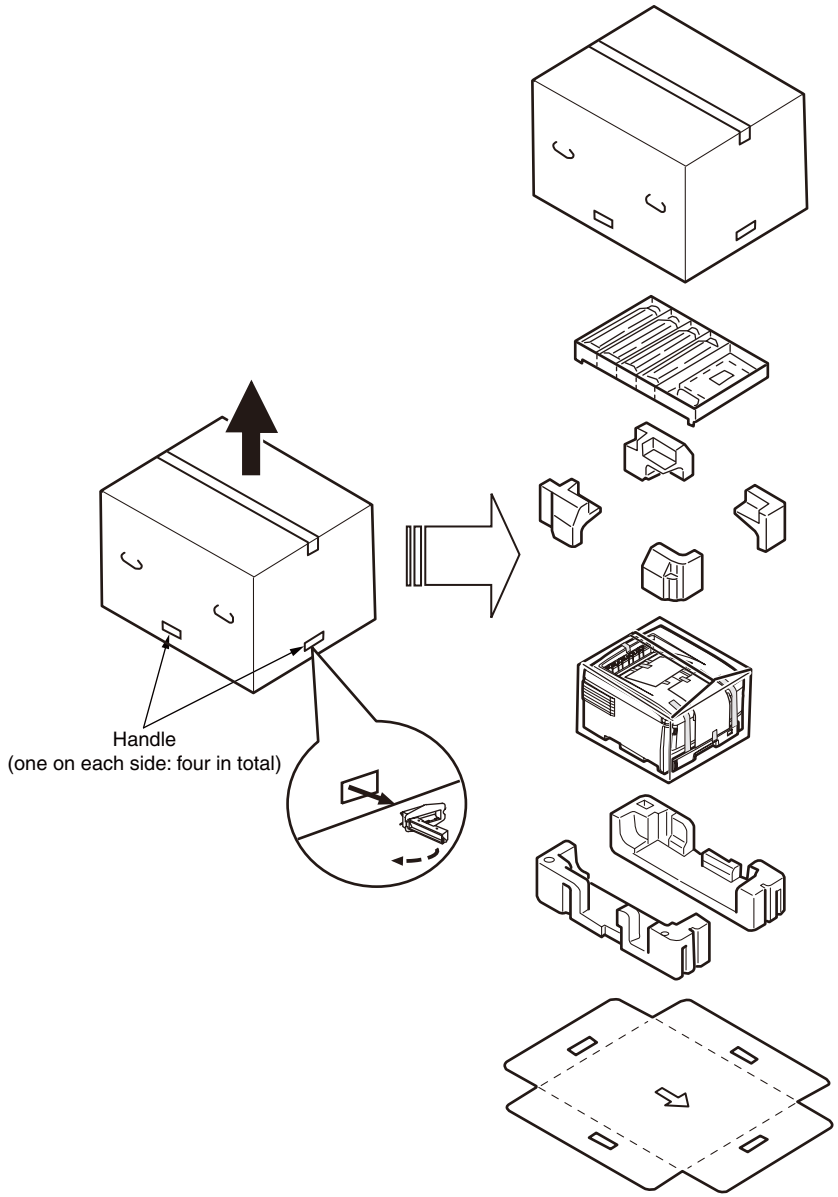
When the precautionary notes concerning the installation and operation are explained, the user should be referred to the precautionary notes given in the user's manual. Especially, give thorough explanation on the power cord and the grounding wire.

3.2 Unpacking procedure

⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 40 kg, it should be lifted by two or more people.

- Remove the four handles from the sides of the box, as illustrated below, and lift the corrugated fiberboard box.



3.3 Printer installation instructions

- Install the printer in a location where the following temperature and humidity are met:

  Ambient temperature: 10 - 32°C

  Ambient humidity: 20 - 80 % RH (relative humidity)

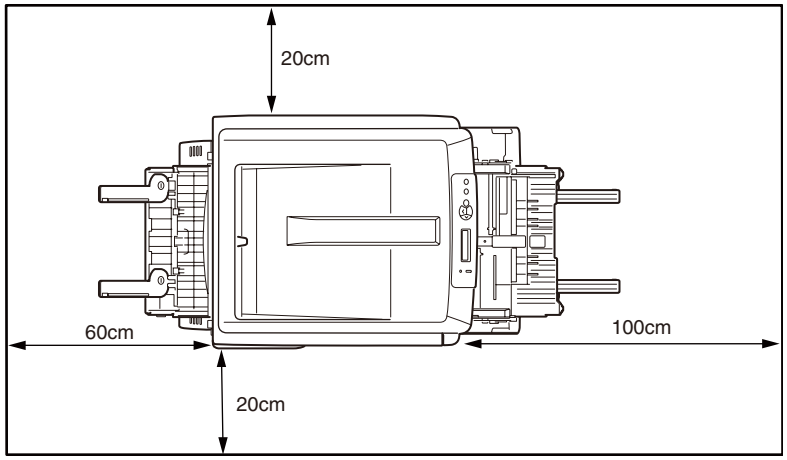
  Maximum wet-bulb temperature: 25°C

- Exercise caution to avoid dew condensation.
- If the printer is installed in a location with ambient relative humidity below 30%, use a humidifier or antistatic mat.

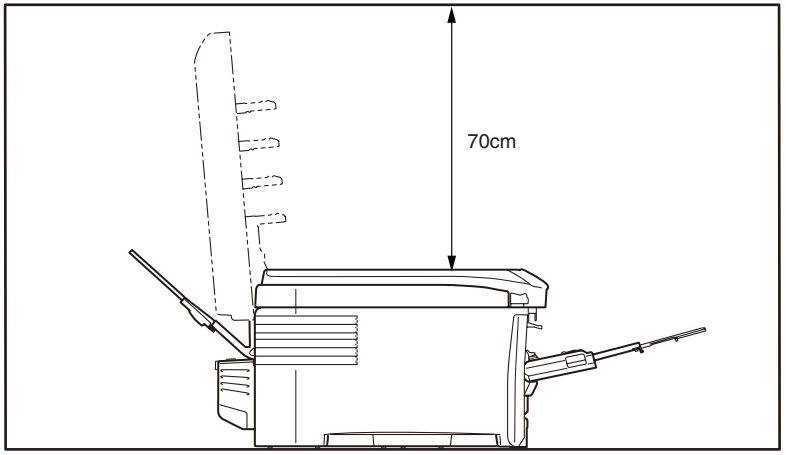
Installation space

- Place the printer on a flat desk large enough to accommodate its footings.
- Provide enough spaces around the printer.

Plan view



Side view



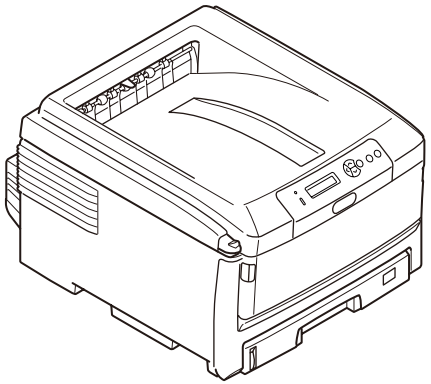
3.4 List of components and accessories

- Check to make sure that the components are free from damage, dirt or other irregularities in their appearance.
- Ensure that none of the accessories to the components is missing and that they are free from breakage or other flaw.
- If any irregularity is discovered, contact the user management section for instructions.

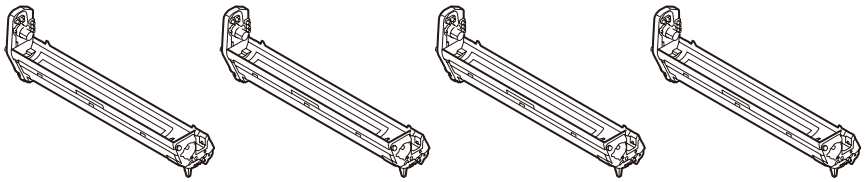
⚠Warning	Personal injury may occur.	⚠

Since the printer weights approximately 40 kg, it should be lifted by two or more people.

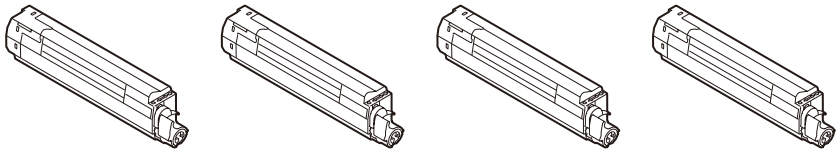
☐ Printer (main unit)



☐ Image drum cartridges (one each of cyan, magenta, yellow, and black) installed in the printer



☐ Toner cartridges (one each of cyan, magenta, yellow, and black) installed in the printer



Inform the user that the toner cartridges and image drum cartridges can be separated one from the other.

☐ Printer software CD-ROM

☐ Power cord

☐ User's manual (Setup)

☐ User's manual (CD-ROM)

☐ Quick Guide

☐ Bag for Quick Guide

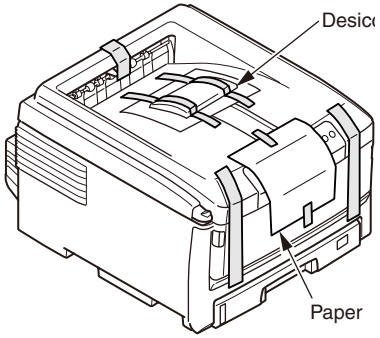
Note! No printer cable is supplied with the printer.

3.5 Assembly procedure

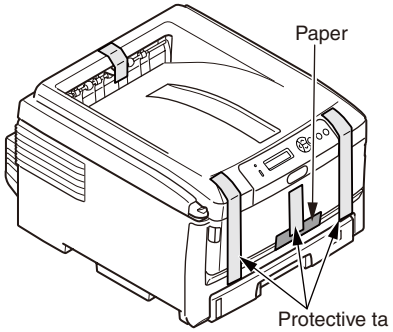
3.5.1 Assembly of the printer main unit

Removing the protective materials

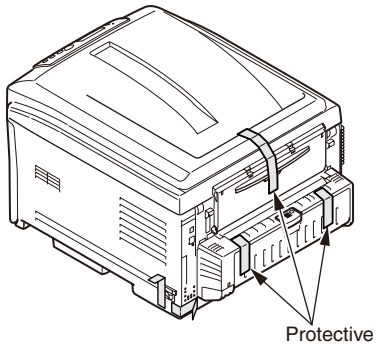
(1) Remove the desiccant and protective paper from the top of the printer.



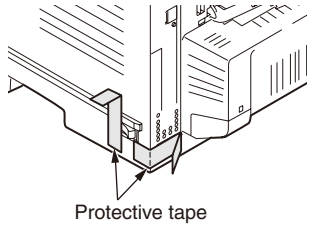
(2) Remove the protective tapes (three places) and protective paper from the front of the printer.



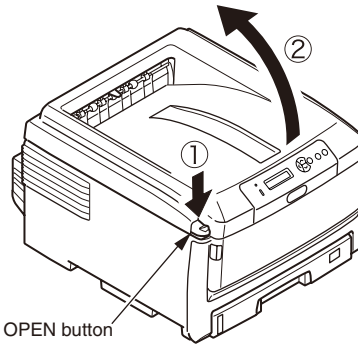
(3) Remove the protective tapes (three places) from the back of the printer and the power unit.



(4) Remove the protective tapes from the power unit.



(5) Press the OPEN button to open the top cover.

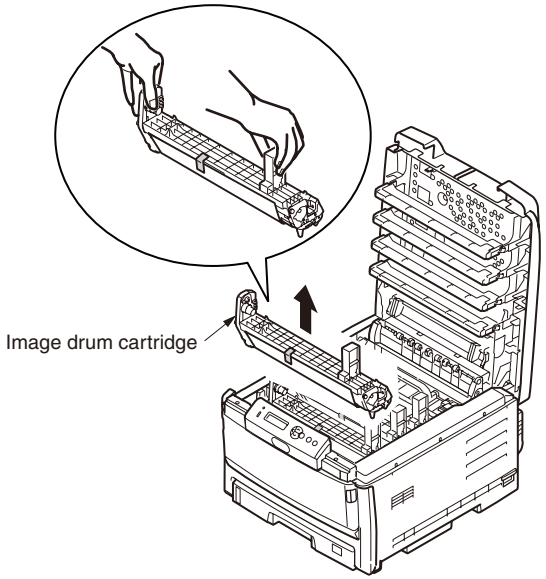


Installing the image drum cartridges

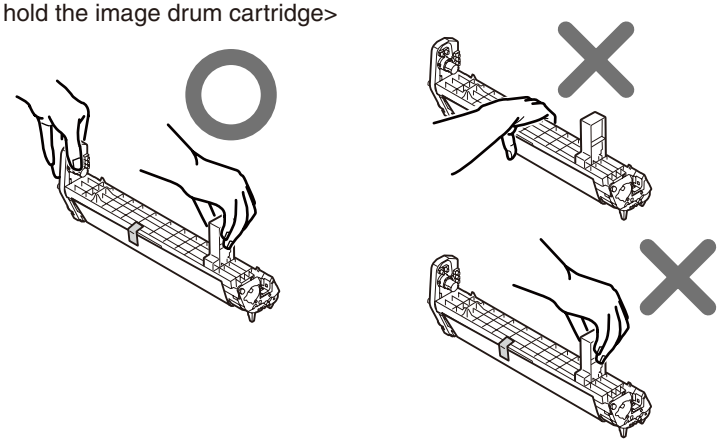
(1) Take out the image drum cartridge (four cartridges) gently.

Note! • The image drum (green cylinder part) is very sensitive to scratches, therefore, special care should be taken on handling.

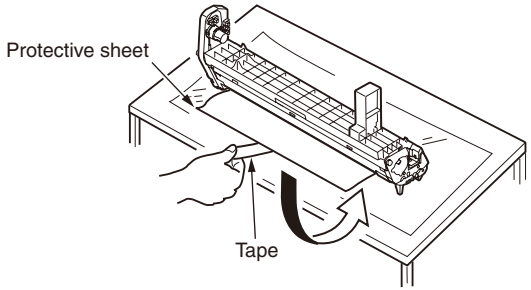
• Do not expose the image drum cartridges to direct sunlight or strong light (approx. 1500 lux or above). Even under room light, do not leave them exposed for five minutes or longer.

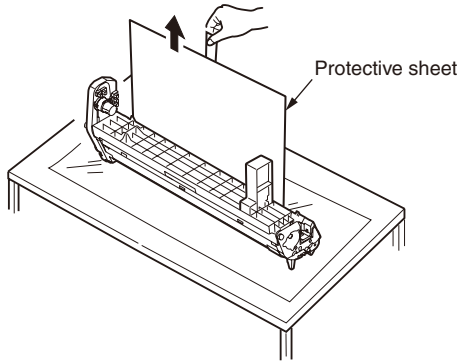


<How to hold the image drum cartridge>

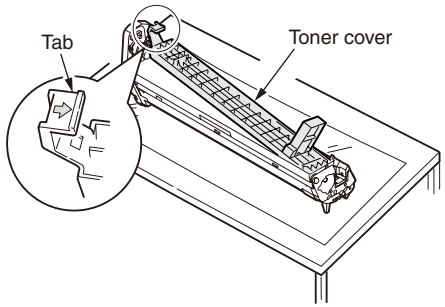


(2) Put the image drum cartridge on newspaper or something, remove the tape holding the protective sheet, and pull the sheet out in the direction of the arrow.





(3) Remove the toner cover.



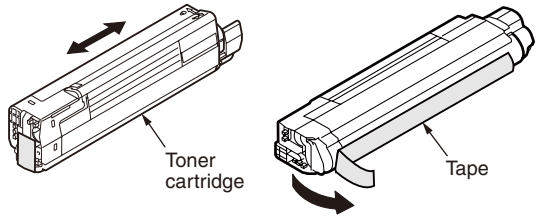
(4) Similarly, remove the protective sheets and toner covers fro the other three image drums.

(5) Install the toner cartridges to the image drum cartridges.

Note! The toner cartridges supplied with the product are capable of printing approximately 2,300 sheets (Paper size:A4, Print density:Default, ISO/IEC 19798).

a) Take the toner cartridge out of its package and shake the toner cartridge several times vertically and horizontally.

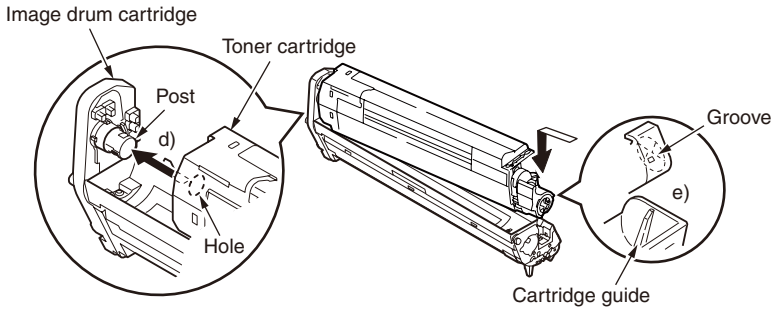
b) Hold the toner cartridge in a horizontal position and slowly remove the tape.



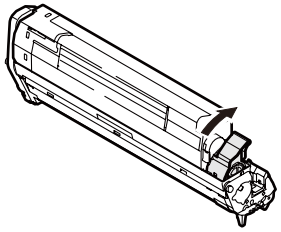
c) Make sure that the color of the toner cartridge's label matches the color of the image drum cartridge's label.

d) Engage the hole of the toner cartridge with the post of the image drum cartridge with the side with the tape removed facing down.

e) Push the toner cartridge in so that the right groove in the cartridge is engaged with the protrusion of the cartridge guide.

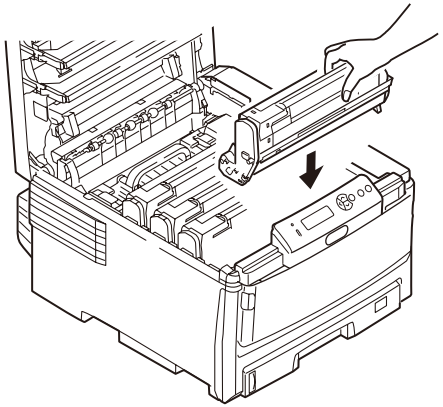


f) Turn the lever on the toner cartridge in the direction of the arrow until it stops.

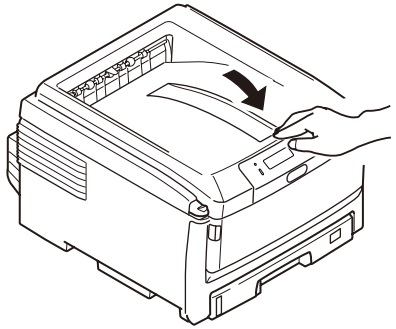


Note! • Do not force the toner cartridges into place. If the cartridges do not fit, check to see if the color of the lever on each of the toner cartridges corresponds to the color of the label on each of the image drum cartridges. If the colors of these labels do not correspond, the toner cartridges cannot be installed.
• The print quality may deteriorate if the toner cartridges are not installed properly.

(6) Install the image drum cartridges with the toner cartridges installed to the printer.



(7) Close the top cover.



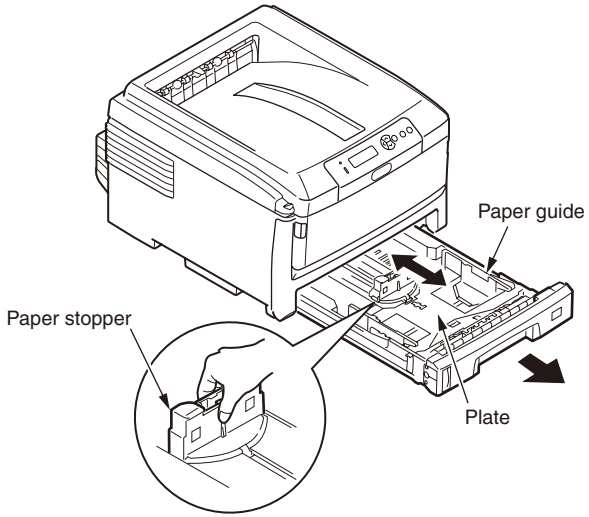
Note! If the message [REPLACE TONER] on the operator panel remains displayed even after a long period of waiting, check to see if the lever on the toner cartridge is moved fully in the direction of the arrow.

Loading paper in the paper cassette

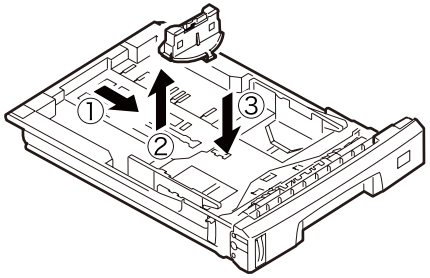
(1) Pull out the paper cassette.

Note! Do not remove the rubber from the plate.

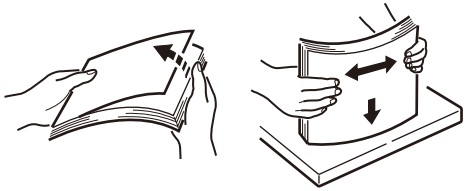
(2) Adjust the paper stopper and paper guide to the size of the paper being used.



Note! When setting A6 size paper, move the paper stopper toward you to remove it. Then attach it to the position shown.



(3) Fan the edges of paper stack and align the edges of the stack on a level surface.

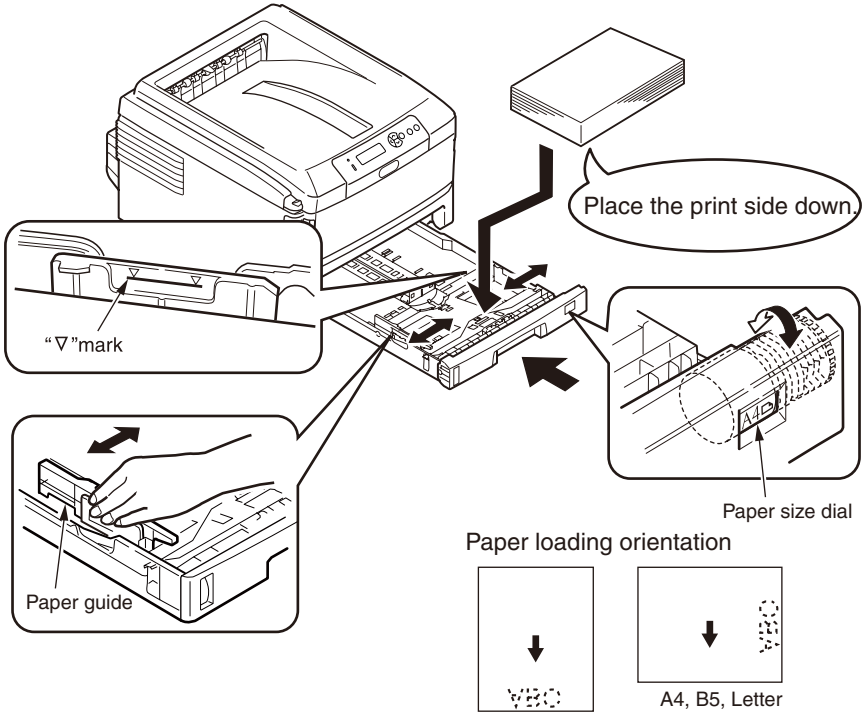


(4) Load the paper with the print side facing down.

Note! • Place the paper against the front side of the paper cassette.
• Do not allow the level of paper to pass the "▽" mark of the paper guide (300 sheets of 70 kg paper).

(5) Hold the paper with the paper guide.

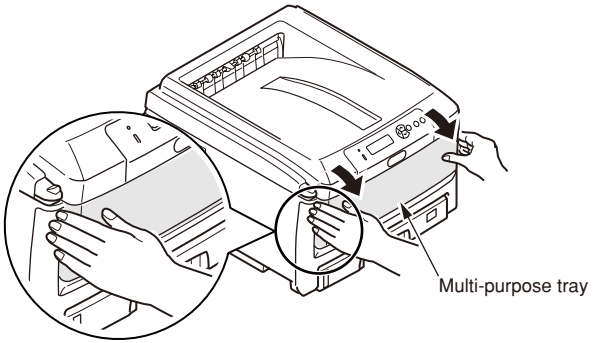
(6) Turn the paper size dial to the size of the paper you load.



(7) Return the paper cassette to the printer.

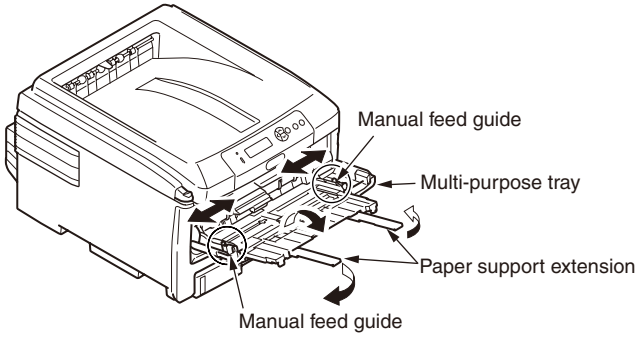
Loading paper in the multi-purpose tray

(1) Open the multi-purpose tray and also the paper supporter.

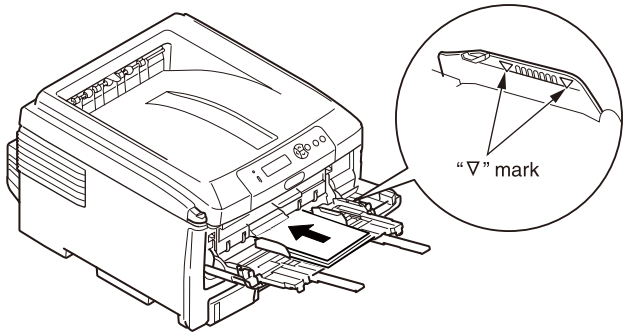


(2) Move the manual feed guide to the paper size.

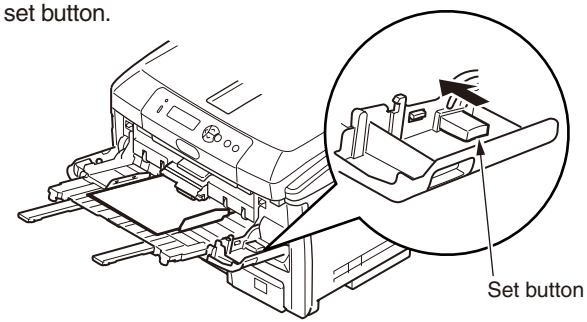
(3) Align the edges of the paper.



(4) Insert the paper, print-face up, along the manual feed guide straight as far as it will go.



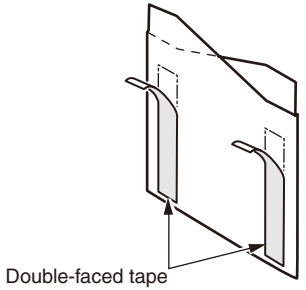
(5) Press the set button.



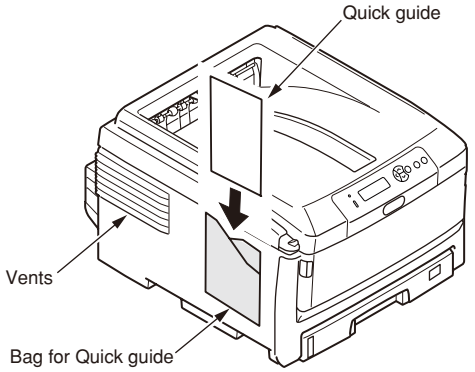
Storing Quick Guide

Stick a bag for Quick Guide on the printer to store Quick Guide.

(1) Remove double-faced tapes (two places) from the back of the bag.



(2) Stick the bag for Quick Guide on the printer.



Note! Stick the bag to a place not to block the vents on the printer.

3.5.2 Connection of the power cable

Power supply conditions

- Observe the following conditions:
  AC: 100V ± 10%
  Power frequency: 50 Hz or 60 Hz ± 2 Hz
- If the available power is unstable, use a voltage regulator of the like.
- The maximum power consumption of this printer is 1,350W. Ensure that the power source offers an ample margin in the power capacity.
- Proper operation with a UPS (uninterruptible power supply) or inverter is not guaranteed. A warning to not use either UPS or inverter should be given to the user.

⚠Warning	It may expose you to electric shocks or cause a fire.	

- Installation and removal of the power cord and the grounding wire must be performed after turning the switch to OFF.
- The grounding wire should be connected to the specified grounding terminal. Never connect the grounding wire to a water pipe, gas pipe, or a telephone line ground, or to a lightning rod or the like.
- Hold the power plug of the power cord to plug in or unplug the cord.
- Insert the power plug securely into a receptacle as far as it will go.
- Do not insert or remove the power plug with wet hands.
- Lay the power cord in a location where it is not likely stepped on, and avoid placing anything on the power cord.
- Do not bundle or tie the power cord.
- Do not use a damaged power cord.
- Avoid many loads on one electrical outlet.
- Do not connect the printer to the same power outlet shared by other electric appliances. Especially, if the printer is connected to the same power outlet in conjunction with an air-conditioner, copy machine or shredder, electric noise may cause false operation of the printer. If it is inevitable to connect them to the same power outlet, use a commercial noise filter or noise-cut transformer.
- Operate the printer with the supplied power cord only. Do not use an extension cord. If it is inevitable to use an extension cord, use one with rating of 15A or more.
- Use of an extension cord may hinder the printer from operating normally because of a voltage drop.
- Be sure to use the power cord supplied with the printer. Do not use a power cord provided for any other products.
- The power cord supplied with the printer is provided only for the printer. Do not use the power cord for other products.
- Do not turn off the power or remove the power plug while the printer is printing.
- If the printer is going to be placed out of use for an extended period of time due to a long spell of holidays or a trip out of town, unplug the power cord.

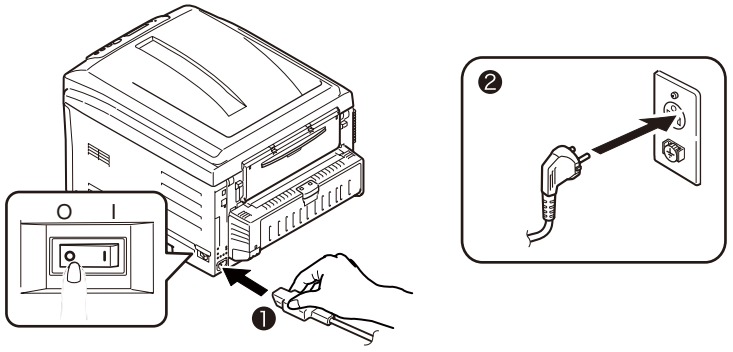
About the connections of the power cord and grounding wire, the user should be given thorough explanation on the basis of the user's manual.

Connecting the power cord

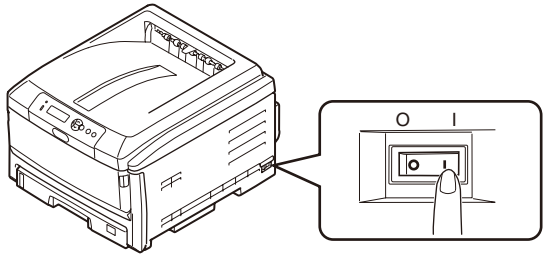
Note! Ensure that the power switch is in OFF (O).

(1) Insert the power cord into the printer.

(2) Inset the power plug into the power outlet.



Pressing on (I) of the power switch

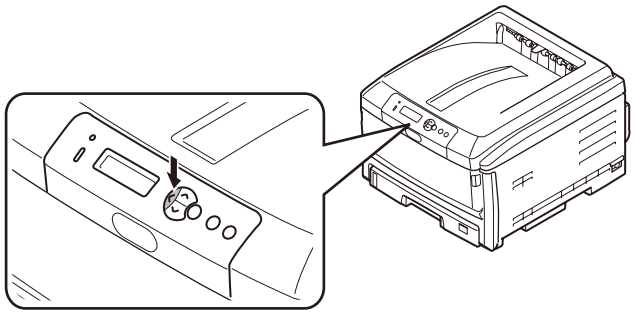


[Toner gauge] will appear when the printer has started up completely.

Turning off the power

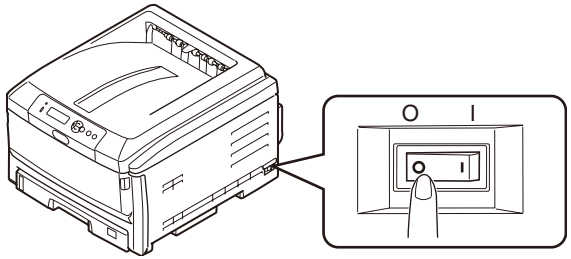
Note! Turning off the power without taking proper shutdown steps may damage and disable the printer. Be sure to follow the steps below.

(1) Press the "BACK" button for at least four seconds to display [SHUTDOWN START].



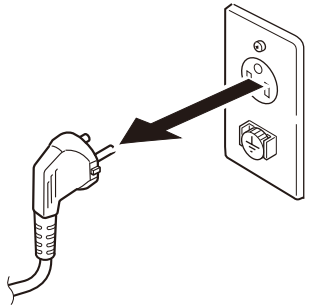
(2) Press the "ENTER" button. [SHUTDOWN] will be displayed and the shutdown process will start.

(3) When [PLEASE POW OFF / SHUTDOWN COMP] is displayed, press the power switch OFF (O).



No use for a long time

Unplug the power cord when the printer will not be used for a long time, such as during long vacations or trips.

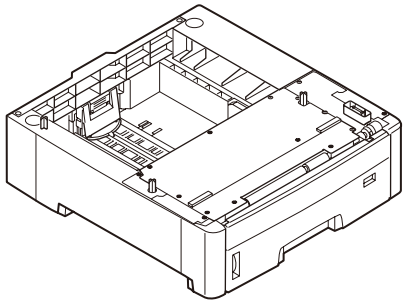


Note! This printer does not cause any malfunction even if the power plug is disconnected for a long time (four weeks or longer).
But unwarranted deterioration of consumables of the printer, including toner and image drums, should be informed to users.

3.5.3 Installation and recognition confirmation of options

(1) Installation of an additional tray unit

An additional tray unit is intended for increasing the amount of paper that can be loaded in the printer, and two additional tray units can be installed to the printer. An additional tray holds 530 sheets of 70 kg paper, allowing the printer to print up to 1,460 sheets continuously when used with a standard paper cassette and a multi-purpose tray together.



1. Turn off the printer and disconnect the power cord.

   Turn off the printer by following the steps described under “Turning off the power” in section 3.5.2.

   Note! • Turning off the power without taking proper shutdown steps may cause a failure of the printer, so be sure to run [SHUT DOWN MENU].
   • Installation of an additional tray unit with the power on may cause a failure of the printer.

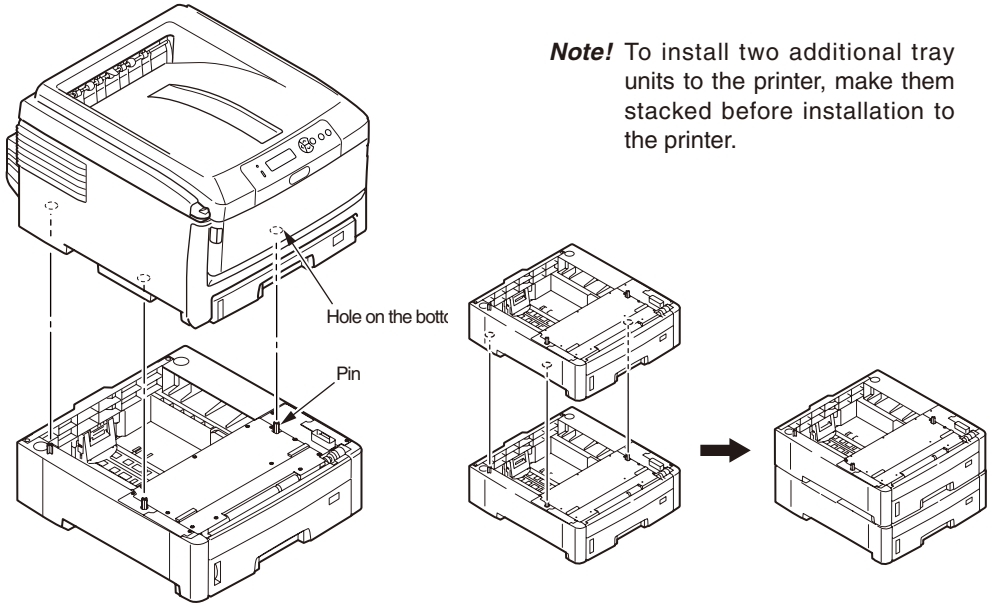
2. Place the printer on an additional tray unit.

   Note! The printer weights approximately 40 kg. It should be lifted by two or more people.

   ❶ Align the holes on the bottom of the printer to the pins of the additional tray unit.

   ❷ Place the printer gently on the additional tray unit.

   To detach the additional tray unit, follow the same procedure in reverse order of installation.

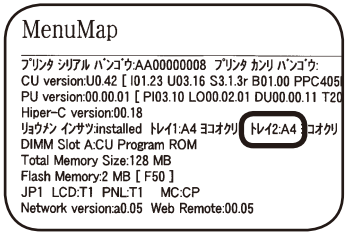


Note! To install two additional tray units to the printer, make them stacked before installation to the printer.

3. Connect the power cord and the printer cable to the printer and turn the power ON.

   Note! If [SERVICE CALL 182: ERROR] appears, remove the installed tray unit and reinstall it to the printer.

4. Print the printer configuration and check the printout for successful installation of every added tray.


MenuMap
ﾌﾟﾘﾝﾀ ｼﾘｱﾙ ﾊﾞﾝｺﾞｳ:AA00000008 ﾌﾟﾘﾝﾀ ｶﾝﾘ ﾊﾞﾝｺﾞｳ:
CU version:U0.42 [I01.23 U03.16 S3.1.3r B01.00 PPC405
PU version:00.00.01 [PI03.10 LO00.02.01 DU00.00.11 T20
Hiper-C version:00.18
ﾘｮｳﾒﾝ ｲﾝｻﾂinstalled ﾄﾚｲ1:A4 ﾖｺｵｸﾘ ﾄﾚｲ2:A4 ﾖｺｵｸﾘ
DIMM Slot A:CU Program ROM
Total Memory Size:128 MB
Flash Memory:2 MB [F50]
JP1 LCD:T1 PNL:T1 MC:CP
Network version:a0.05 Web Remote:00.05

❶ Print the printer configuration by following the steps described in section 3.6.

❷ Check to make sure that every installed tray is shown in [Print Count] of [Printer Information].

Note! If every added tray is not shown there, remove every installed tray unit and reinstall them to the printer.

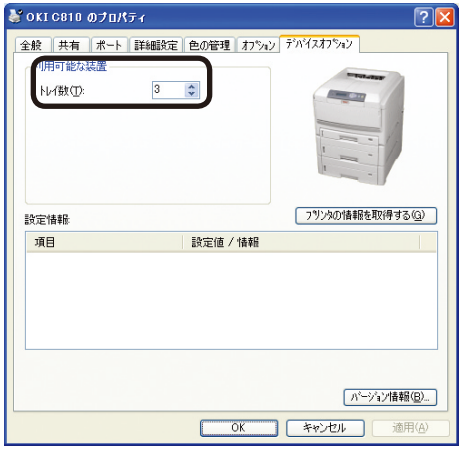
5. Set the number of trays in the printer driver.

Setting should be made in the printer driver to have the printer recognize every added tray.

If the printer driver hasn't been set up, set up the printer driver by referring to the relevant user's manual (Setup) and then perform the following setup.

Note! Administrator privileges on the computer are required.

Settings for Windows PS printer driver



(Screen of Windows XP)

❶ For Windows Vista/Server 2008, select [Start] - [Control Panel] - [Printers].

For Windows XP, select [Start] - [Control Panel] - [Printers and Other Hardware] - [Printers and Faxes].

For Windows 2000, select [Start] - [Settings] - [Printers].

For Windows Server 2003, select [Start] - [Printers and Faxes].

❷ Right-click the [OKI C810/C801] or [OKI C810/C801(XPS)] icon and select [Properties].

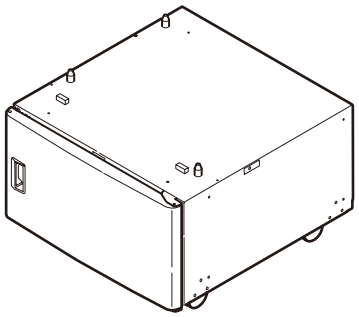
❸ Select [Obtain Printer Information] in [Installable Options] on the [Device Settings] tab and click [Setup] or [Obtain Printer Information]. For USB connection, manually set an appropriate value in [Number of Trays].

❹ Click [OK].

Installation of a roller cabinet

When placing the printer on the floor, it is recommended to use a roller cabinet. The printer main unit, or printer with additional trays can be set on the cabinet.
This cabinet has rollers that allow users to move the printer easily.
You can store paper or consumable in this cabinet.

Cabinet

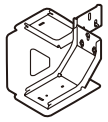


Accessories

Support Plate
(1 piece)

Screw
(17 pieces)

Anti-tip bracket
cover (6 pieces)



Anti-tip bracket
for the rear side
(2 pieces)

Anti-tip bracket
for the front side
(2 pieces)

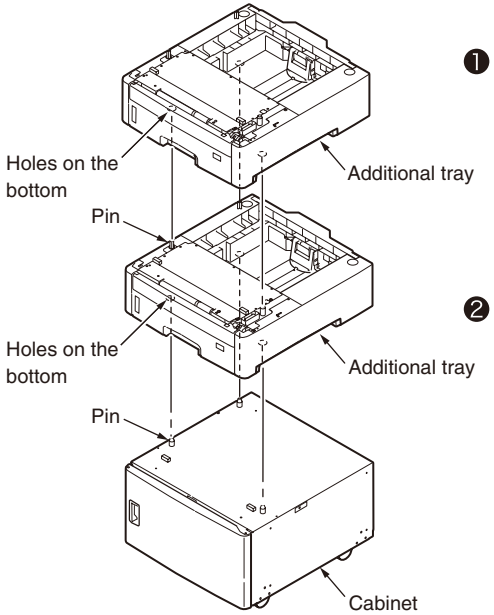
1. Turn off the printer to remove the power cord and the printer cable.

Note! Installing with the printer ON may damage the printer.

Memo Refer to “Turning off the power” for the turn-off procedure.

2. Put the additional trays on the cabinet.

Note! Do not lift the printer and additional trays together.



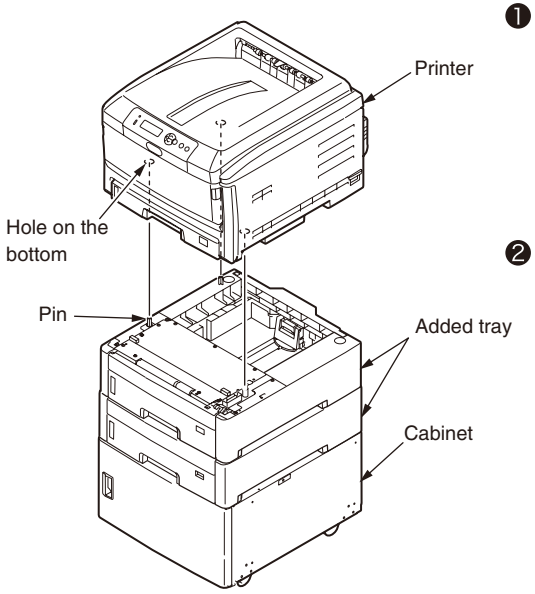
❶ Align the holes on the bottom of the additional tray to the pins of the cabinet.

❷ Place the additional trays gently on the cabinet.

3. Place the printer on the stack of additional trays.

⚠Caution	Personal injury may occur.	⚠

Since the printer weights approximately 40 kg, it should be lifted by two or more people.



❶ Align the holes on the bottom of the printer to the pins of the additional tray.

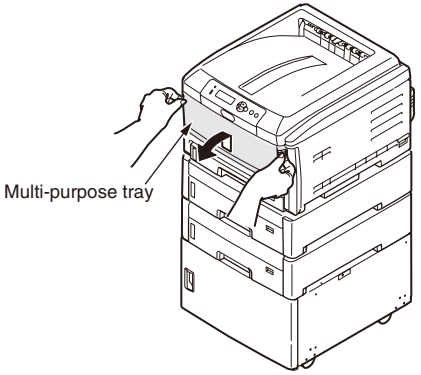
❷ Place the printer gently on the stack of additional trays.

Proceed to step 5 when one additional tray is used.

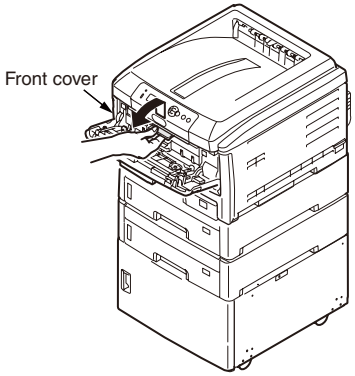
4. Install the support plate.

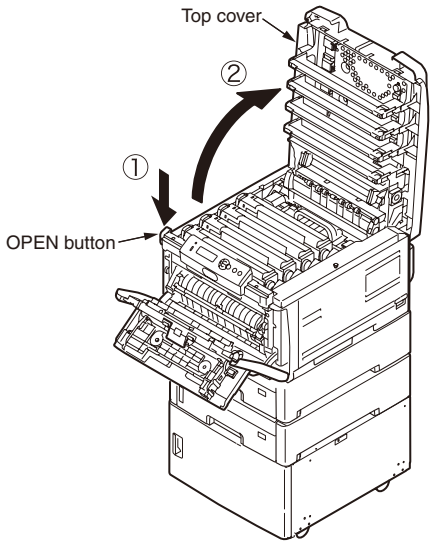
Memo The plate can be installed only when two additional trays are used. It cannot be installed for the printer main unit only when one additional tray is used.

❶ Open the multi-purpose tray.



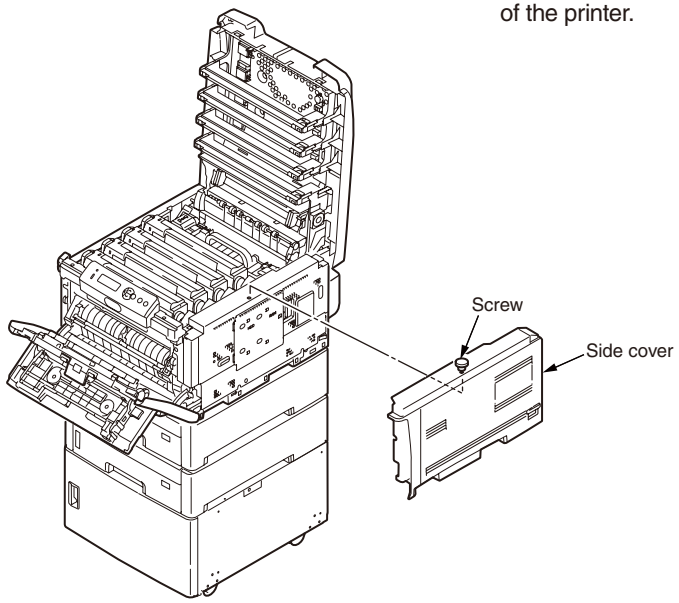
❷ Push up the center handle (blue) to open the front cover.





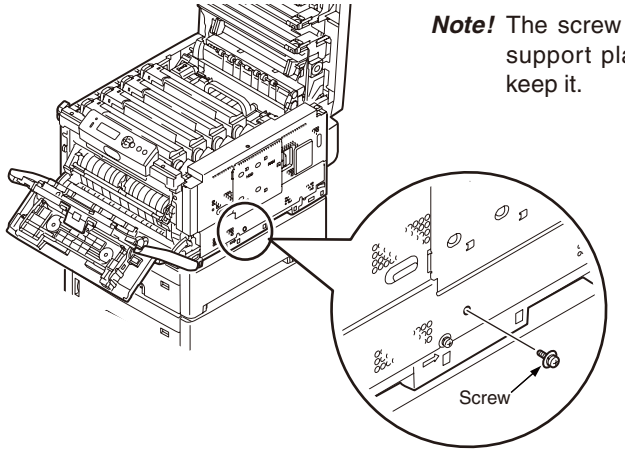
❸ Push the OPEN button to open the top cover.

❹ Loosen a screw to detach the side cover of the printer.



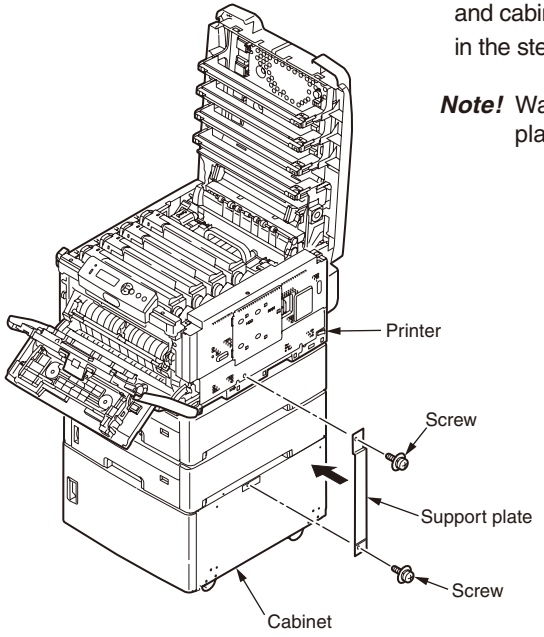
❺ Unscrew the screw.

Note! The screw is used to install the support plate, so make sure to keep it.



❻ Install the support plate to the printer and cabinet with the screw unscrewed in the step ❺.

Note! Watch the shape of the support plate to install it.



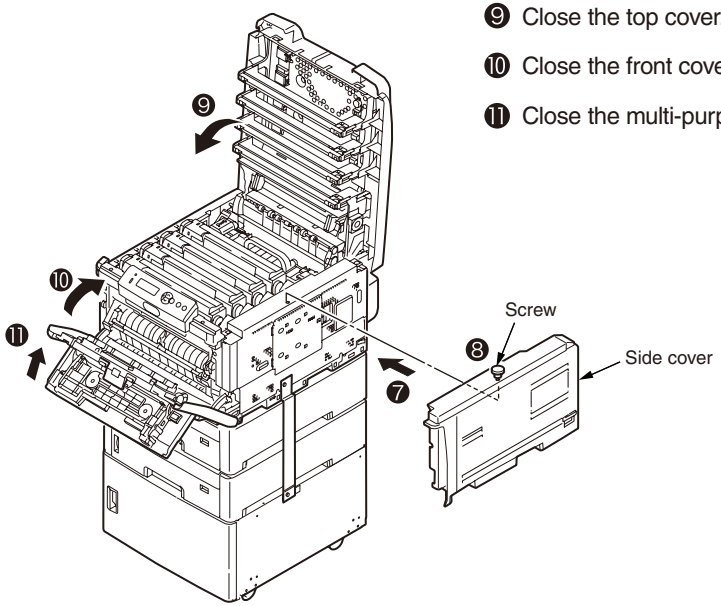
❼ Attach the side cover of the printer.

❽ Fix the side cover with the screw.

❾ Close the top cover.

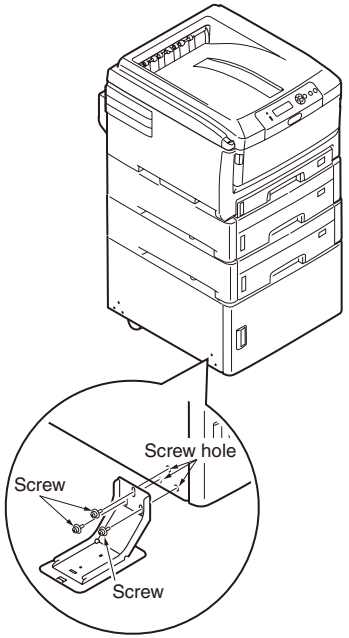
❿ Close the front cover.

⓫ Close the multi-purpose tray.

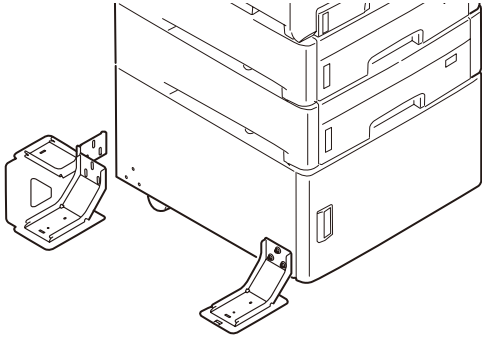


5. Attach anti-tip brackets.

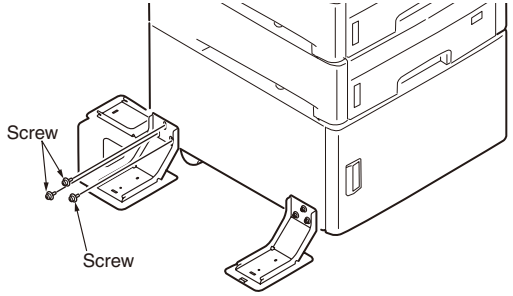
❶ Attach an anti-tip bracket (for the front side) to the left side of the cabinet with three screws.



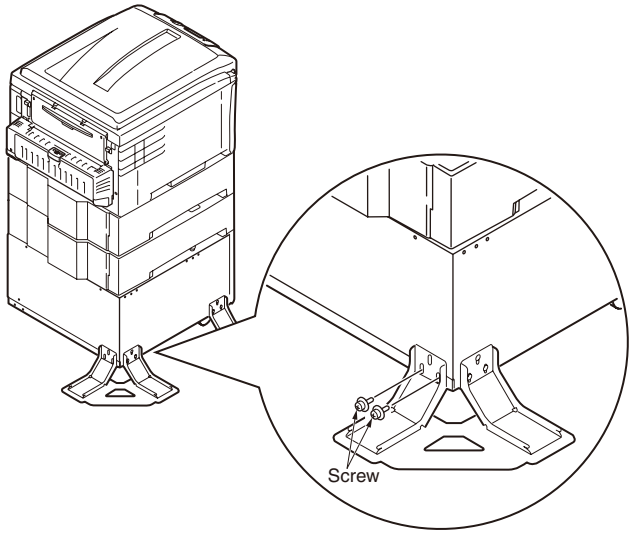
❷ Fit an anti-tip bracket (for the rear side) to the left back corner of the cabinet.



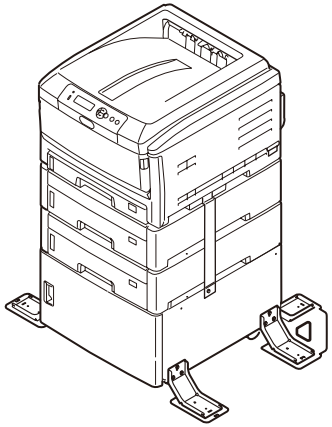
❸ Attach it to the left side with three screws.



❹ Attach it to the rear side with two screws.

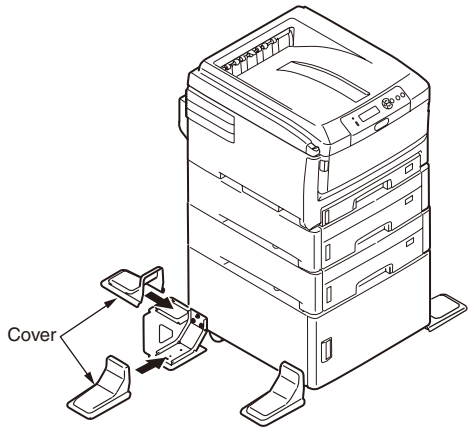


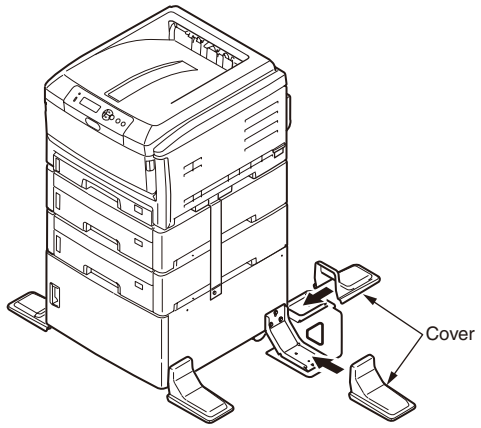
❺ Attach the rest of anti-tip brackets (for each of the front side and the rear side) to the right side with the same steps ❶ through ❹.



6. Attach the anti-tip bracket covers.

Attach covers to the anti-tip brackets by sliding the covers (six places).





7. Attach the power cord and cables to the printer and turn on the power.

8. Check that the additional trays are correctly attached, and set up the additional trays in the computer.

Memo For the procedure to check for installation of additional trays, see “(1) Installation of an additional tray unit”.

How to remove the anti-tip bracket covers

Insert a flat-blade screwdriver into the opening of an anti-tip bracket cover, move the cover upward by turning the screwdriver to disengage the cover, and pull the cover to remove (Figure 1). Do not remove the cover by force; otherwise, the cover may be broken. If the cover is not removed easily, pull the over with hands hardly to remove (Figure 2).

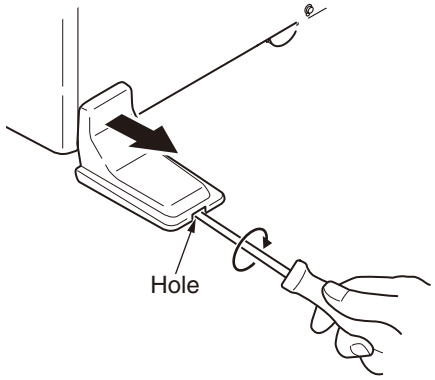


Figure 1

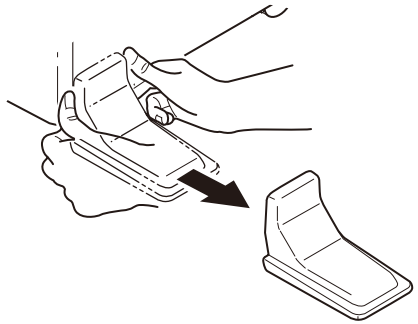


Figure 2

	Personal injury may occur.

3.6 Printing of the MENU MAP

Check that the printer operates correctly.

(1) Load A4 paper in Tray.

(2) Press the menu select button several times until [Information Menu] appears.

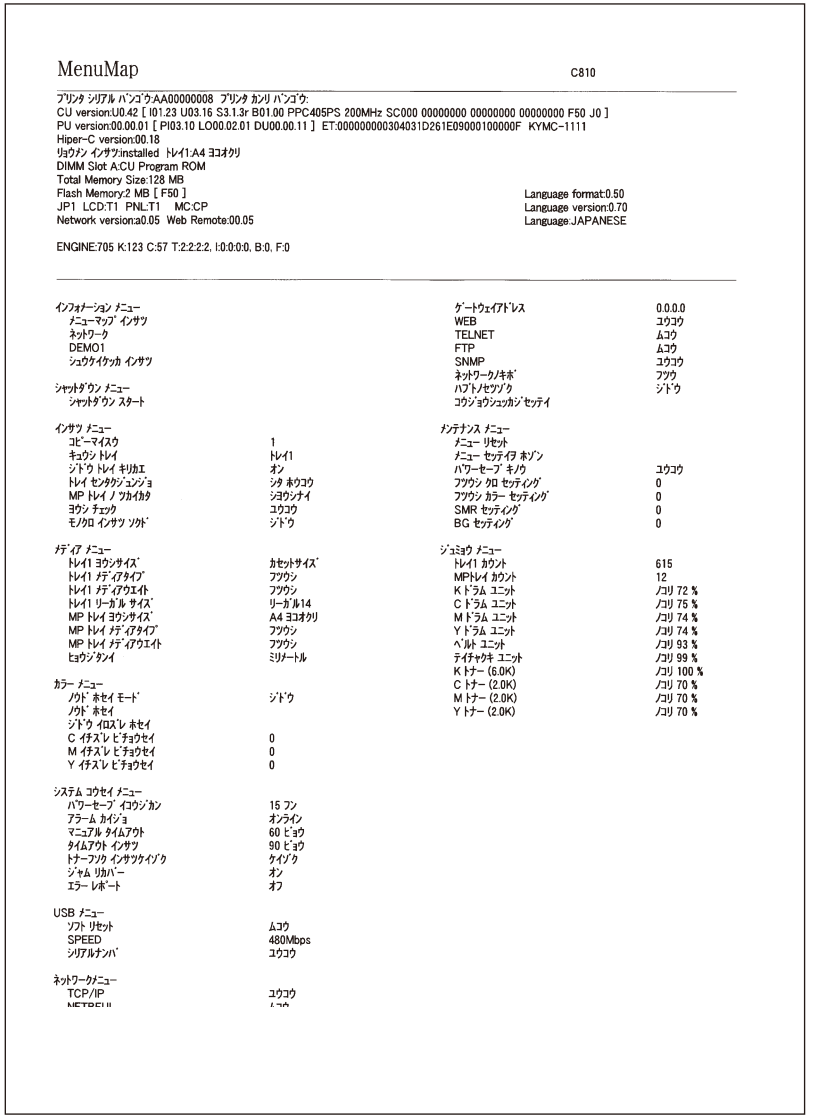
(3) Press the ENTER button until [Print Menu Map/Execute] appears.

(4) Press the ENTER button.

Printing of the MENU MAP is started.

Memo To print Network Information (two pages), press the button after the step (3) to view [Network] and then press the ENTER button.

Sample



MenuMap C810

ﾌﾟﾘﾝﾀ ｼﾘｱﾙ ﾊﾞﾝｺﾞｳ:AA00000008 ﾌﾟﾘﾝﾀ ｶﾝﾘ ﾊﾞﾝｺﾞｳ:
CU version:U0.42 [I01.23 U03.16 S3.1.3r B01.00 PPC405PS 200MHz SC000 00000000 00000000 00000000 F50 J0]
PU version:00.00.01 [P103.10 LO00.02.01 DU00.00.11] ET:000000000304031D261E09000100000F KYMC-1111
Hiper-C version:00.18
ﾘｮｳﾎﾝ ｲﾝｻﾂ:installed トレイ1:A4 ヨコオクリ
DIMM Slot A:CU Program ROM
Total Memory Size:128 MB
Flash Memory:2 MB [F50]
JP1 LCD:T1 PNL:T1 MC:CP
Network version:a0.05 Web Remote:00.05
Language format:0.50
Language version:0.70
Language:JAPANESE

ENGINE:705 K:123 C:57 T:2:2:2:2, I:0:0:0:0, B:0, F:0

インフォメーション メニュー		ｹﾞｰﾄｳｪｲｱﾄﾞﾚｽ	0.0.0.0
ﾒﾆｭｰﾏｯﾌﾟ ｲﾝｻﾂ		WEB	ﾕｳｺｳ
ﾈｯﾄﾜｰｸ		TELNET	ﾑｺｳ
DEMO1		FTP	ﾑｺｳ
ｼｭｳｹｲｹｯｶ ｲﾝｻﾂ		SNMP	ﾕｳｺｳ
		ﾈｯﾄﾜｰｸ/ｷｷﾞ	ﾌﾂｳ
ｼｬｯﾄﾀﾞｳﾝ ﾒﾆｭｰ		ﾊﾌﾞﾄﾉｾﾂｿﾞｸ	ｼﾞﾄﾞｳ
ｼｬｯﾄﾀﾞｳﾝ ｽﾀｰﾄ		ｺｳｼﾞｮｳｼｭｯｶｼﾞｾｯﾃｲ	
インサツ メニュー		メンテナンス メニュー	
ｺﾋﾟｰﾏｲｽｳ	1	ﾒﾆｭｰ ﾘｾｯﾄ	
ｷｭｳｼﾝ ﾄﾚｲ	ﾄﾚｲ1	ﾒﾆｭｰ ｾｯﾃｲﾌｫ ﾎｿﾞﾝ	
ｼﾄﾞｳ ﾄﾚｲ ｷﾘｶｴ	ｵﾝ	ﾊﾟﾜｰｾｰﾌﾞ ｷﾉｳ	ﾕｳｺｳ
ﾄﾚｲ ｾﾝﾀｸｼﾞｭﾝｼﾞｮ	ｼﾀ ﾎｳｺｳ	ﾌﾂｳｼ ｸﾛ ｾｯﾃｨﾝｸﾞ	0
MP ﾄﾚｲ ﾉ ﾂｶｲｶﾀ	ｼｮｳｼﾝﾅｲ	ﾌﾂｳｼ ｶﾗｰ ｾｯﾃｨﾝｸﾞ	0
ﾖｳｼ ﾁｪｯｸ	ﾕｳｺｳ	SMR ｾｯﾃｨﾝｸﾞ	0
ﾓﾉｸﾛ ｲﾝｻﾂ ｿｸﾄﾞ	ｼﾄﾞｳ	BG ｾｯﾃｨﾝｸﾞ	0
ﾒﾃﾞｨｱ ﾒﾆｭｰ		ｼﾞｭﾐｮｳ ﾒﾆｭｰ	
ﾄﾚｲ1 ﾖｳｼｻｲｽﾞ	ｶｾｯﾄｻｲｽﾞ	ﾄﾚｲ1 ｶｳﾝﾄ	615
ﾄﾚｲ1 ﾒﾃﾞｨｱﾀｲﾌﾟ	ﾌﾂｳｼ	MPﾄﾚｲ ｶｳﾝﾄ	12
ﾄﾚｲ1 ﾒﾃﾞｨｱｳｴｲﾄ	ﾌﾂｳｼ	K ﾄﾞﾗﾑ ﾕﾆｯﾄ	ﾉｺﾘ 72 %
ﾄﾚｲ1 ﾘｰｶﾞﾙ ｻｲｽﾞ	ﾘｰｶﾞﾙ14	C ﾄﾞﾗﾑ ﾕﾆｯﾄ	ﾉｺﾘ 75 %
MP ﾄﾚｲ ﾖｳｼｻｲｽﾞ	A4 ﾖｺｵｸﾘ	M ﾄﾞﾗﾑ ﾕﾆｯﾄ	ﾉｺﾘ 74 %
MP ﾄﾚｲ ﾒﾃﾞｨｱﾀｲﾌﾟ	ﾌﾂｳｼ	Y ﾄﾞﾗﾑ ﾕﾆｯﾄ	ﾉｺﾘ 74 %
MP ﾄﾚｲ ﾒﾃﾞｨｱｳｴｲﾄ	ﾌﾂｳｼ	ﾍﾞﾙﾄ ﾕﾆｯﾄ	ﾉｺﾘ 93 %
ﾋｭｳｼﾞﾀｲﾒｲ	ﾐﾘﾒｰﾄﾙ	ﾃｲﾁｬｸｷ ﾕﾆｯﾄ	ﾉｺﾘ 99 %
		K ﾄﾅｰ (6.0K)	ﾉｺﾘ 100 %
ｶﾗｰ ﾒﾆｭｰ		C ﾄﾅｰ (2.0K)	ﾉｺﾘ 70 %
ﾉｳﾄﾞ ﾎｾｲ ﾓｰﾄﾞ	ｼﾞﾄﾞｳ	M ﾄﾅｰ (2.0K)	ﾉｺﾘ 70 %
ﾉｳﾄﾞ ﾎｾｲ		Y ﾄﾅｰ (2.0K)	ﾉｺﾘ 70 %
ｼﾄﾞｳ ｲﾛｽﾞﾚ ﾎｾｲ			
C ｲﾁｽﾞﾚ ﾋﾞﾁｮｳｾｲ	0		
M ｲﾁｽﾞﾚ ﾋﾞﾁｮｳｾｲ	0		
Y ｲﾁｽﾞﾚ ﾋﾞﾁｮｳｾｲ	0		
ｼｽﾃﾑ ｺｳｾｲ ﾒﾆｭｰ			
ﾊﾟﾜｰｾｰﾌﾞ ｲｺｳｼﾞｶﾝ	15 ﾌﾝ		
ｱﾗｰﾑ ｶｲｼﾞｮ	ｵﾝﾗｲﾝ		
ﾏﾆｭｱﾙ ﾀｲﾑｱｳﾄ	60 ﾋﾞｮｳ		
ﾀｲﾑｱｳﾄ ｲﾝｻﾂ	90 ﾋﾞｮｳ		
ﾄﾅｰﾌﾘｸ ｲﾝｻﾂｹｲｼﾞｸ	ｹｲｼﾞｸ		
ｼﾞｬﾑ ﾘｶﾊﾞｰ	ｵﾝ		
ｴﾗｰ ﾚﾎﾟｰﾄ	ｵﾌ		
USB ﾒﾆｭｰ			
ｿﾌﾄ ﾘｾｯﾄ	ﾑｺｳ		
SPEED	480Mbps		
ｼﾘｱﾙﾅﾝﾊﾞ	ﾕｳｺｳ		
ﾈｯﾄﾜｰｸﾒﾆｭｰ			
TCP/IP	ﾕｳｺｳ		
NETBEUI	ﾑｺｳ		

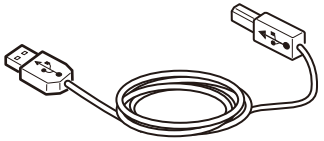
3.7 Connection methods

<USB connection>

Note! Refer to the user's manual for operating environment.

Preparing a USB cable

Note!
- No printer cable is supplied with the printer. Ask the user to prepare a printer cable.
- Ask the user to prepare a USB cable.
- When connection is to be made in "High-Speed" mode with a USB 2.0, use a Hi-Speed-ready USB 2.0 cable.
- A USB 2.0 cable to be used must be no more than five meters long. A USB cable of two meters or less is recommended.



Switching off the printer and the computer

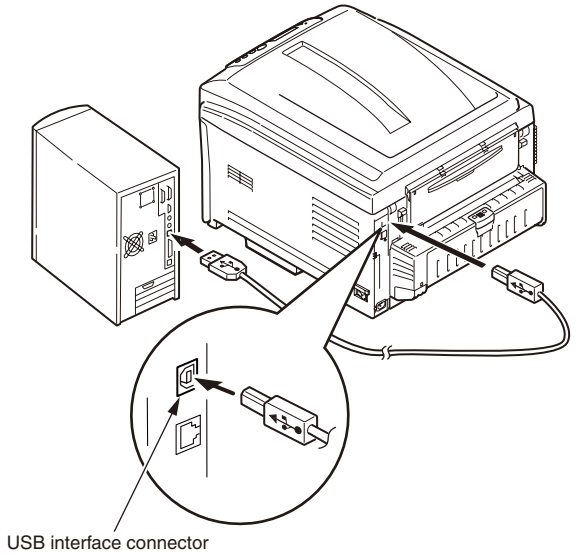
Memo Although a USB cable can be plugged in or unplugged with the computer and the printer switched on, for secure installation of the USB driver and the printer driver to be performed subsequently, the printer should be turned off.

Connecting the computer to the printer

(1) Plug the USB cable into the USB interface connector of the printer.

(2) Plug the USB cable into the USB interface connector of the computer.

Note! Be careful not to plug the USB cable into the network interface connector. Such wrong connection could cause malfunction.



Memo For the setup procedure of the printer driver, see the user's manual.

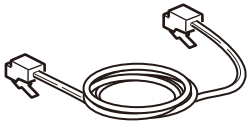
<Ethernet cable connection>

Note! Refer to the user's manual for operating environment.

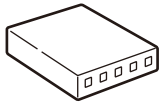
Preparing an Ethernet cable

Note! An Ethernet cable and a hub do not come with the printer. Ask the user to prepare an Ethernet cable (a Category 5 twisted pair cable, straight through) and a hub.

<Ethernet cable>



<Hub>

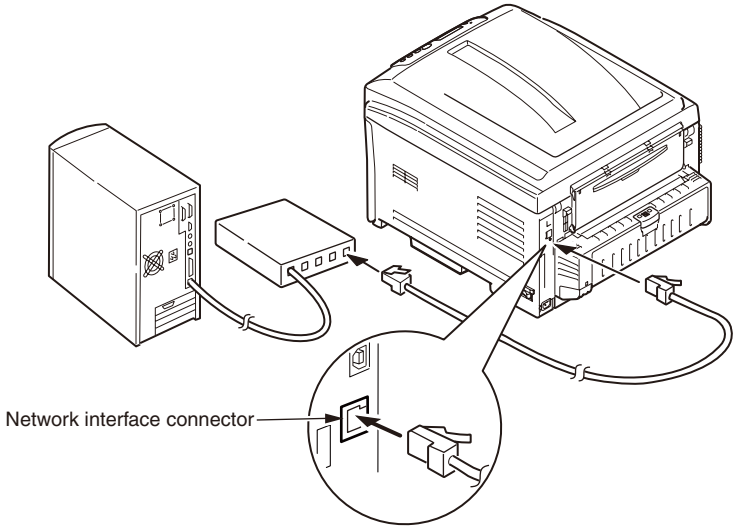


Switching off the printer and the computer

Connecting the computer to the printer

(1) Plug the Ethernet cable into the network interface connector of the printer.

(2) Plug the Ethernet cable into the hub.



Memo For the setup procedure of the printer driver, see the user's manual.

3.8 Checking of paper used by the user

Load the media used by the user in the printer, make media weight/media type settings, execute menu map /demo printing, and check the printout to make sure that no toner flakes off.

Type	Weight or thickness	Setting*2 for [Media weight] of the printer driver	Settings on the operator panel	
			Media weight (paper thickness)	Media type (paper type)*1
Plain paper*3	55-70 kg (64-82g/m^2)	Light	Light	Plain paper
	71-77 kg (83-90g/m^2)	Medium Light	Medium Light	
	78-90 kg (91-105g/m^2)	Medium	Medium	
	91-110 kg (106-128g/m^2)	Heavy	Heavy	
	111-175 kg (129-203g/m^2)	Ultra heavy 1	Ultra heavy 1	
	176-189 kg (204-220g/m^2)	Ultra heavy 2	Ultra heavy 2	
Postcard*4	—	—	—	—
Envelope*4	—	—	—	—
Label	0.1 to under 0.17 mm	Label 1	Heavy	Label
	0,17 to 0.2 mm	Label 2	Ultra heavy 1	

*1: The factory default for the media type is [Light/OEL] [Medium Light/ODA].

*2: Media weight and type can be set on the operator panel and in the printer driver. The settings in the printer driver take priority. Data is printed out in accordance with the setting on the operator panel when [Auto selection] is selected in [Feed tray] or [Printer setting] is selected in [Media weight].

*3: The weight of the paper supported for duplex print is 55-90 kg (64-105g/m2).

*4: It is not necessary to set media weight and type for postcards and envelopes.

Memo Print speed decelerates when [Heavy] or [Ultra heavy] of media weight or [Label paper] of media type is set.

4. REPLACEMENT OF PARTS

This chapter describes the procedures of the field replacement of parts, assemblies and units. The procedures are to detach them. Reverse the procedures to attach them.

The reference part numbers used in this manual (such as ① and ②) do not identical to the part numbers in the maintenance disassembly configuration diagram 44015503TL and the RSPL 44015503TR.

4.1 Notes on replacement of parts 55
4.2 Part replacement procedure.....57
4.3 Portions Lubricated 96

4.1 Notes on replacement of parts

(1) Prior to replacing a part, unplug the AC cord and the interface cable.

(a) Be sure to use the following procedure to unplug the AC cord:

① Turn off the printer (the power switch to the off (O) position).

② Pull out the AC plug of the AC cord from the AC power source.

③ Unplug the AC cord and the interface cable.

⚠Warning	Electric shock hazard.	⚡

When replacing the low-voltage power supply, due to potential electric shock, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

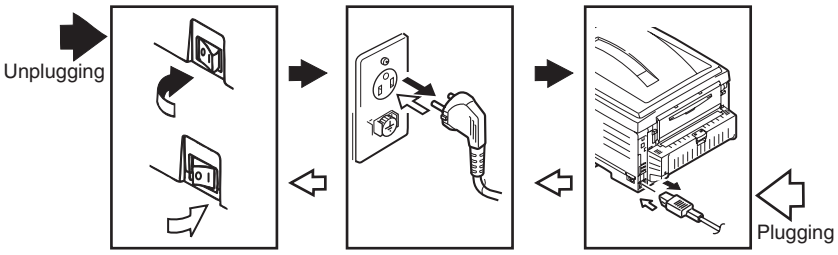
After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

(b) Be sure to use the following procedure to reconnect the printer:

① Connect the AC cord and the interface cable to the printer.

② Insert the AC plug into the AC power source.

③ Turn on the printer (the power switch to the on (I) position).



(2) Do not disassemble the printer so long as it operates properly.

(3) Minimize disassembly. Do not detach the parts not shown in the part replacement procedure.

(4) Use the replacement tools specified.

(5) Conduct disassembly in the order instructed, or part damage may occur.

(6) Removed small parts, such as screws or collars, should be tentatively installed in their original positions.

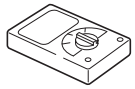
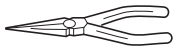
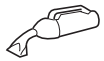
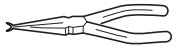
(7) Do not use static-prone gloves when handling integrated circuits (ICs) or circuit boards, including microprocessors, and ROM and RAM chips.

(8) Do not place printed-circuit boards (PCBs) directly on the printer or a floor.

Maintenance Tools:

Table 4-1-1 shows the tools necessary to replace printed-circuit boards and units:

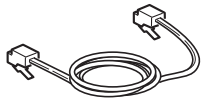
Table 4-1-1: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		No. 2-200 screwdriver with magnetic tip	1	3- to 5-mm screws	
2		Screwdriver No. 3-100	1		
3		Screwdriver No. 5-200	1		
4		Digital multimeter	1		
5		Pliers	1		
6		Handy vacuum cleaner (toner vacuum)	1		See note.
7		E-ring pliers	1	E-shaped ring removal	

Note! Use a toner vacuum. Using a general-purpose vacuum may cause toner to catch fire.

Table 4-1-2 shows the tools necessary to use Maintenance Utility software.

Table 4-1-2: Maintenance Tools

No.	Maintenance Tool		Quantity	Use	Remarks
1		Notebook personal computer (with Maintenance Utility software installed)	1		See section 5.2 for Maintenance Utility.
2		USB cable	1		
3		Ethernet cable (crossover cable)	1		

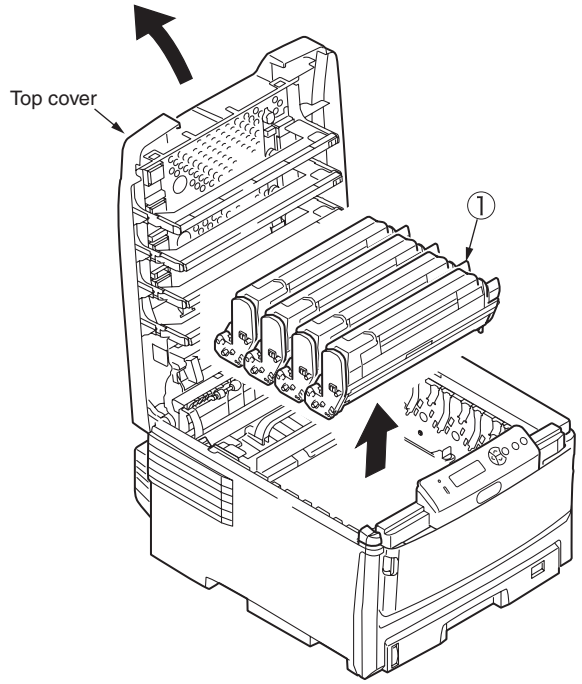
4.2 Part replacement procedure

This section describes the procedure for replacing the parts and assemblies shown in the disassembly diagram.

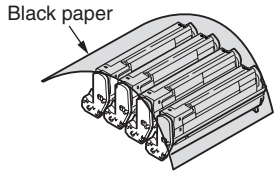
4.2.1 Belt unit

(1) Open the top cover.

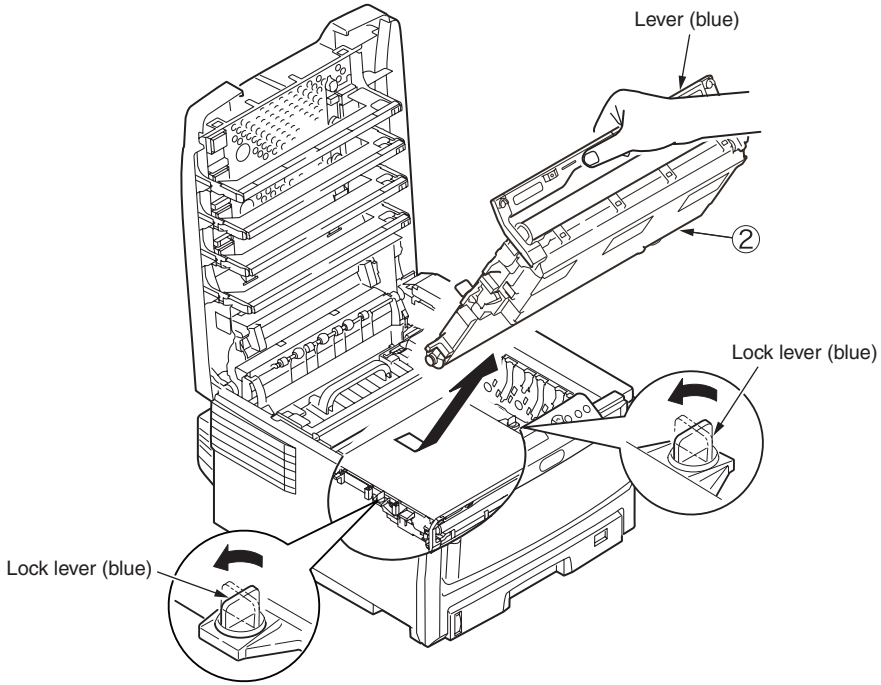
(2) Remove the image drum unit ①.



Note! Cover the image drum cartridges with a piece of black paper.



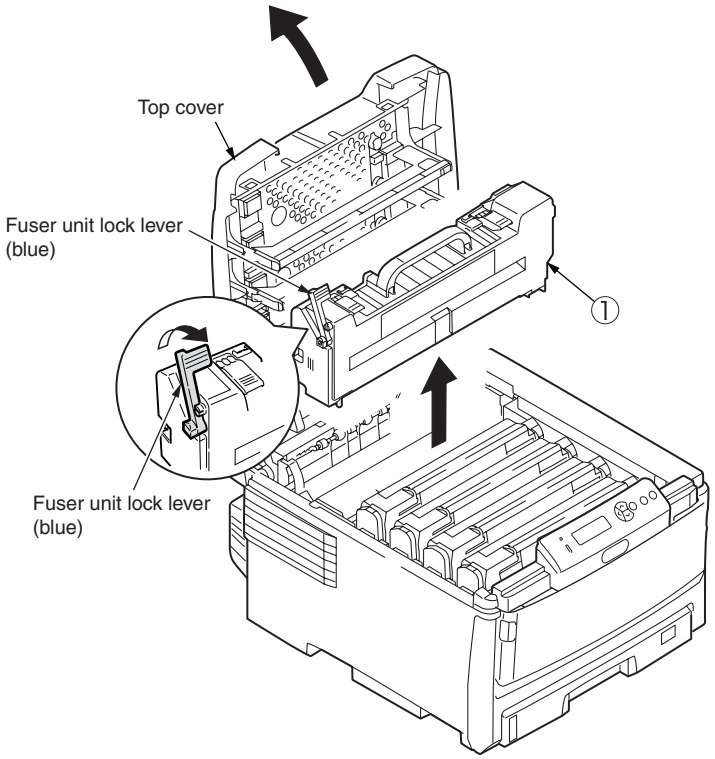
(3) Turn the two lock handles (blue) of the belt unit ② in the direction of the arrows and, holding the unit by the (blue) handle, detach the unit.



4.2.2 Fuser unit

(1) Open the top cover.

(2) Pull the fuser unit lock lever (blue) in the direction of the arrow and detach the fuser unit ①.

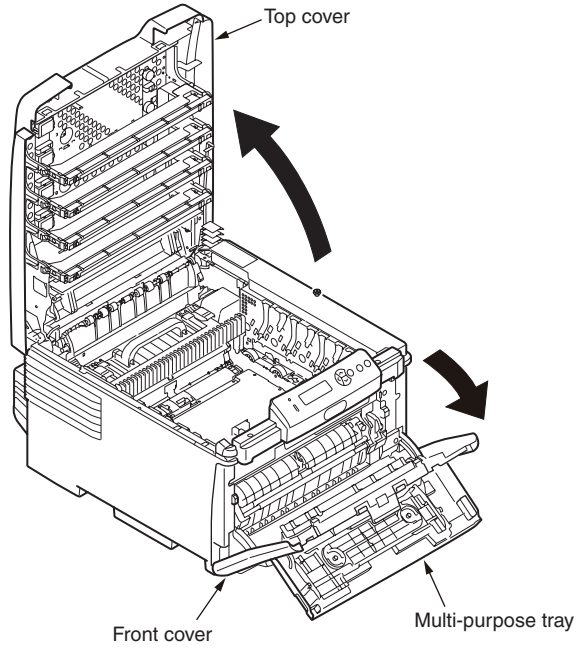


4.2.3 Left side cover

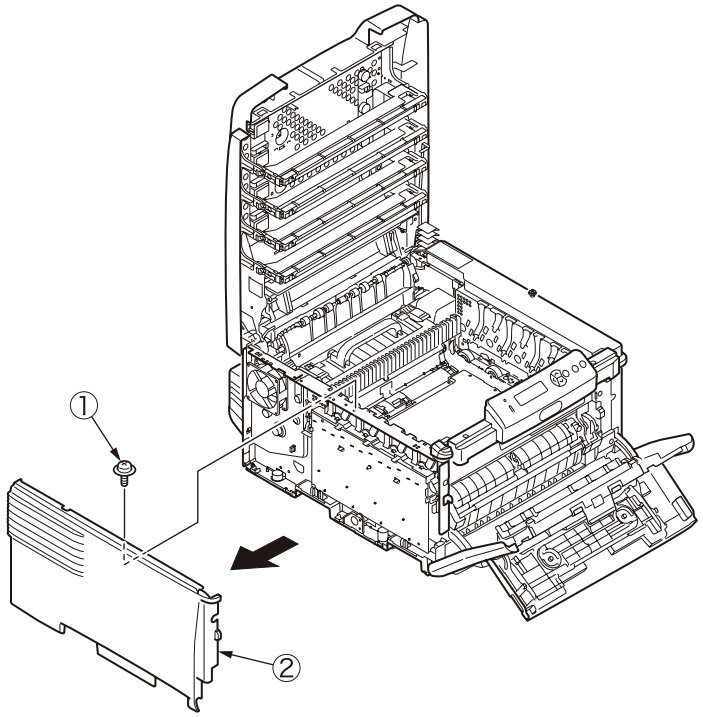
(1) Open the top cover.

(2) Open the multi-purpose tray.

(3) Open the front cover.



(4) Remove the screw (silver-colored) ① to detach the left side cover ② (tool number 1).



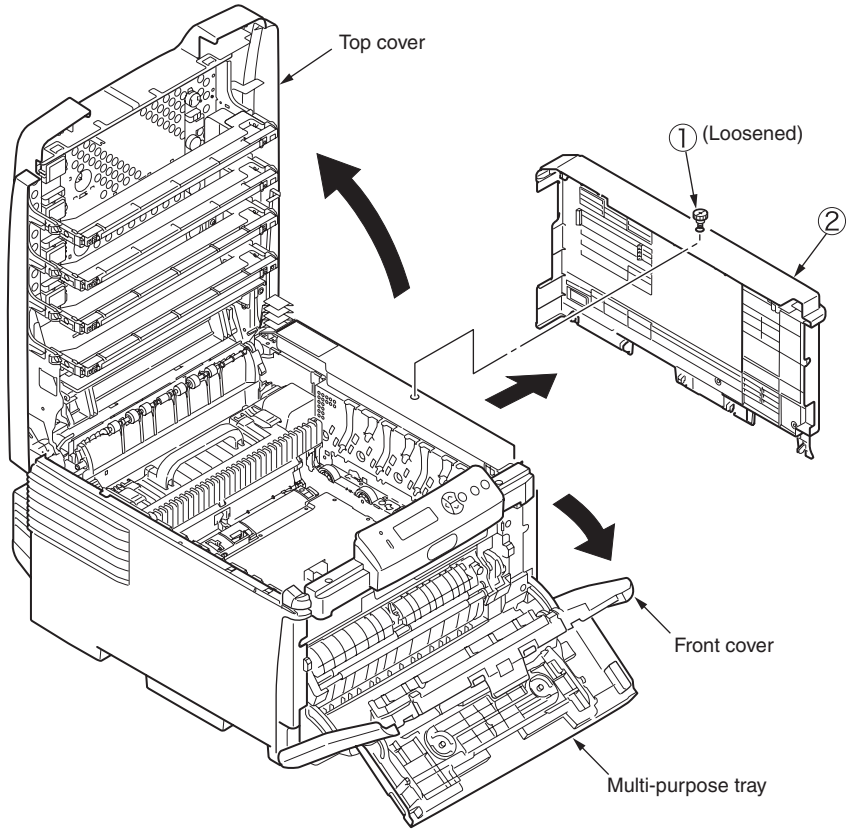
4.2.4 Right side cover

(1) Open the top cover.

(2) Open the multi-purpose tray.

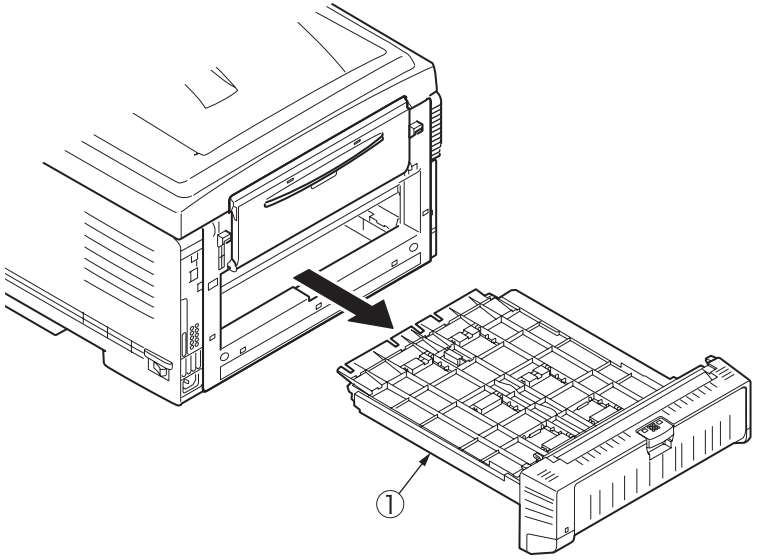
(3) Open the front cover.

(4) Loosen the screw ① and detach the right side cover ② (tool number 1).

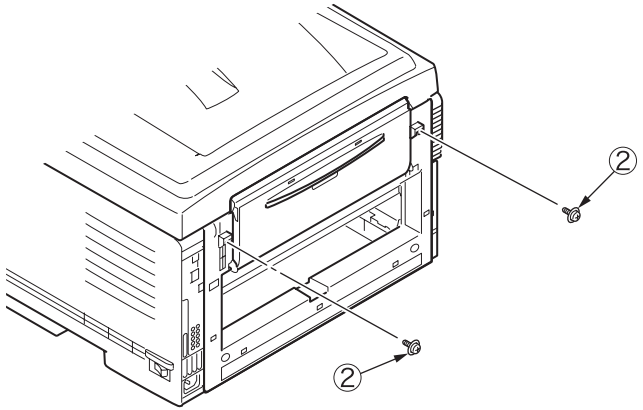


4.2.5 Rear cover Assy.

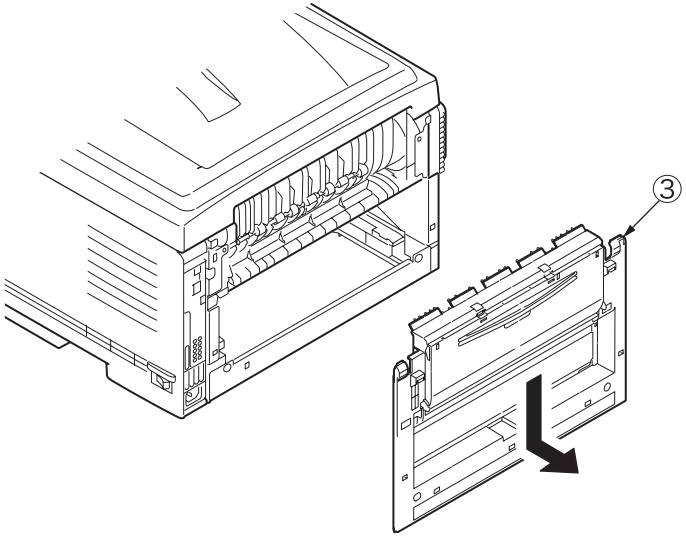
(1) Pull out the duplex unit ①.



(2) Remove the two screws (silver-colored) ② (tool number 1).



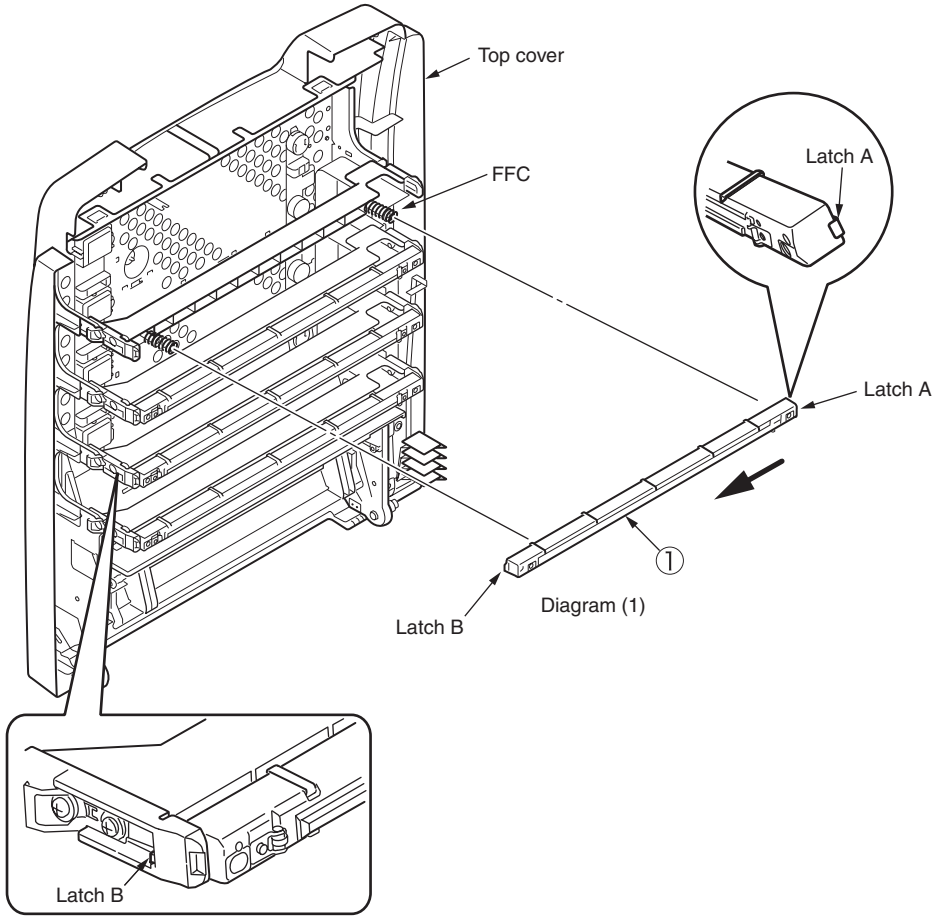
(3) Sliding the rear cover Assy ③ in the direction of the arrow, detach it.



4.2.6 LED Assy.

(1) Open the top cover.

(2) Remove the FFC cables. As shown in diagram (1), applying force in the direction of the arrow, unlatch the portion A, and then the portion B, to detach the LED Assy. ①.

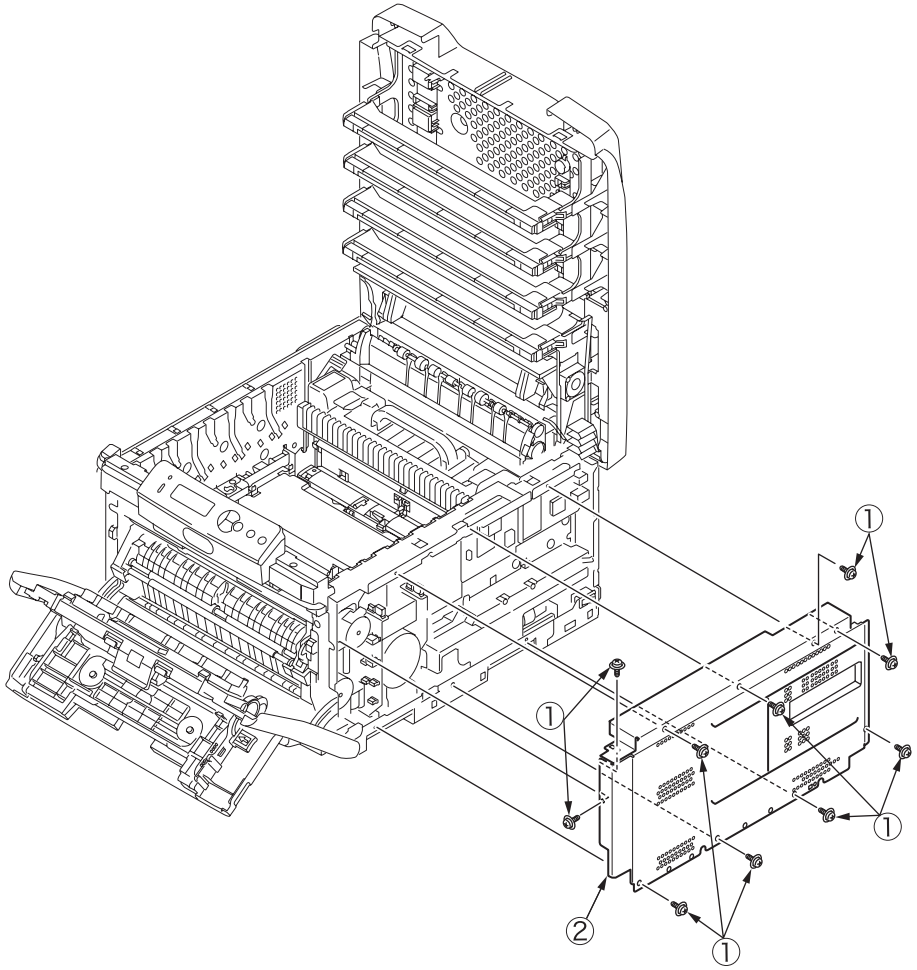


4.2.7 Main controller PCB, image drum motor, image drum lift-up motor and feed motor

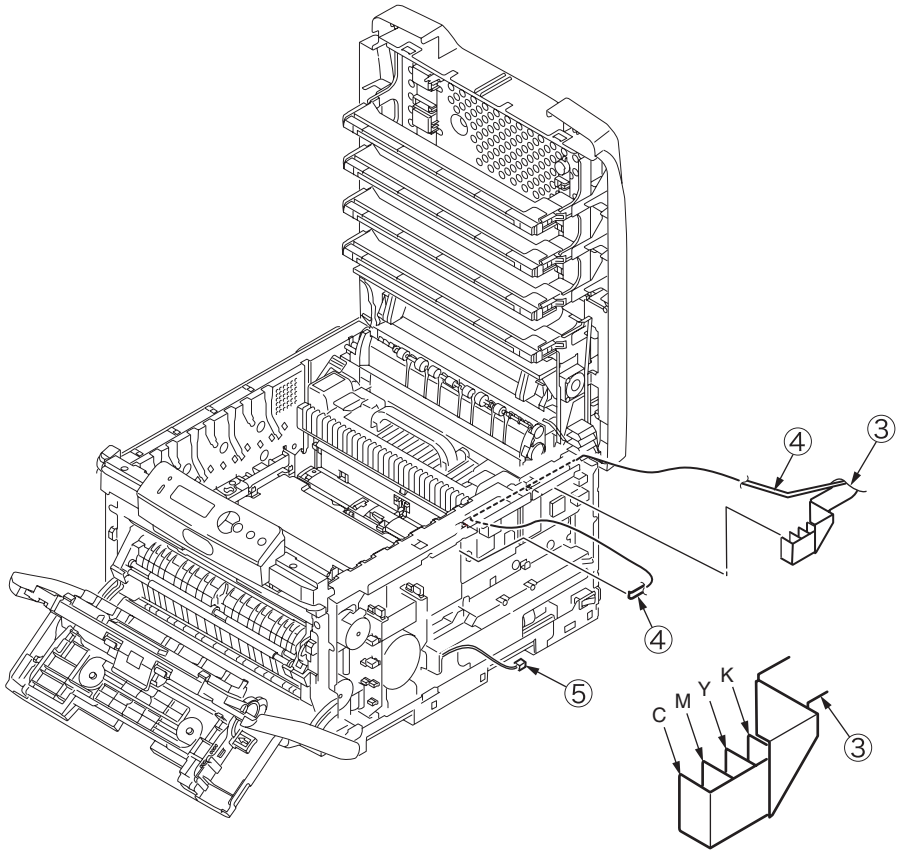
(1) Open the top cover.

(2) Remove the right side cover (see section 4.2.4).

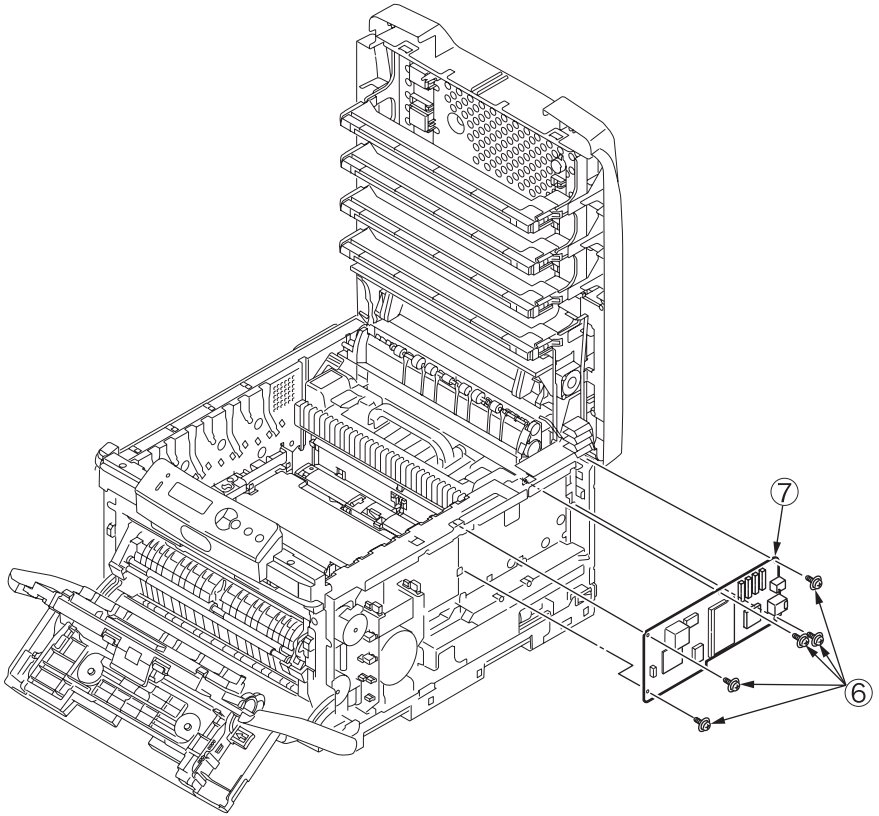
(3) Remove the ten screws (silver-colored) ① and the plate shield Assy. ② (tool number 1).



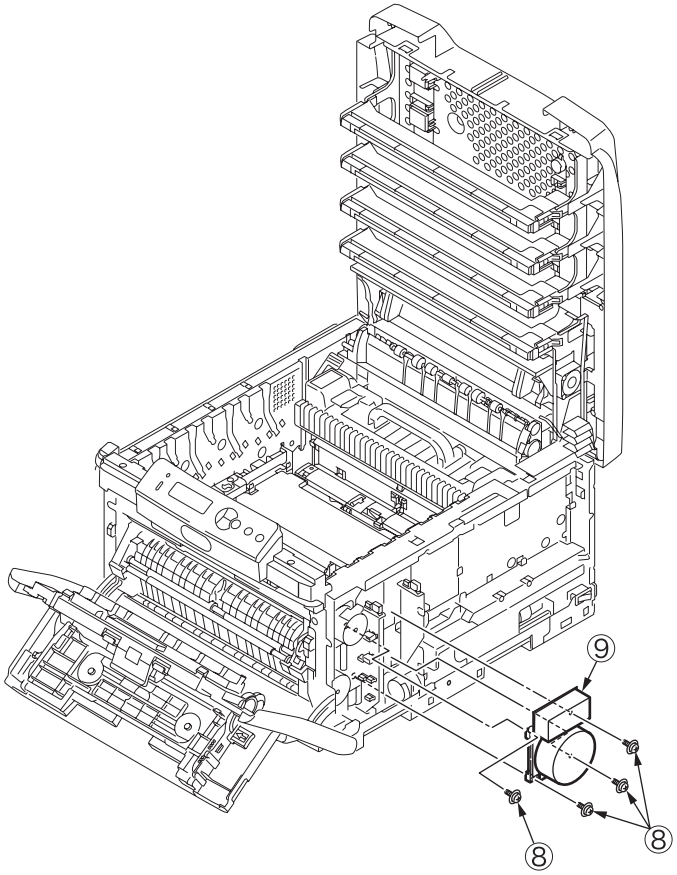
(4) Remove the FFC cables ③ of the LED heads, the RFID FFC cable ④ and the power supply connector ⑤.



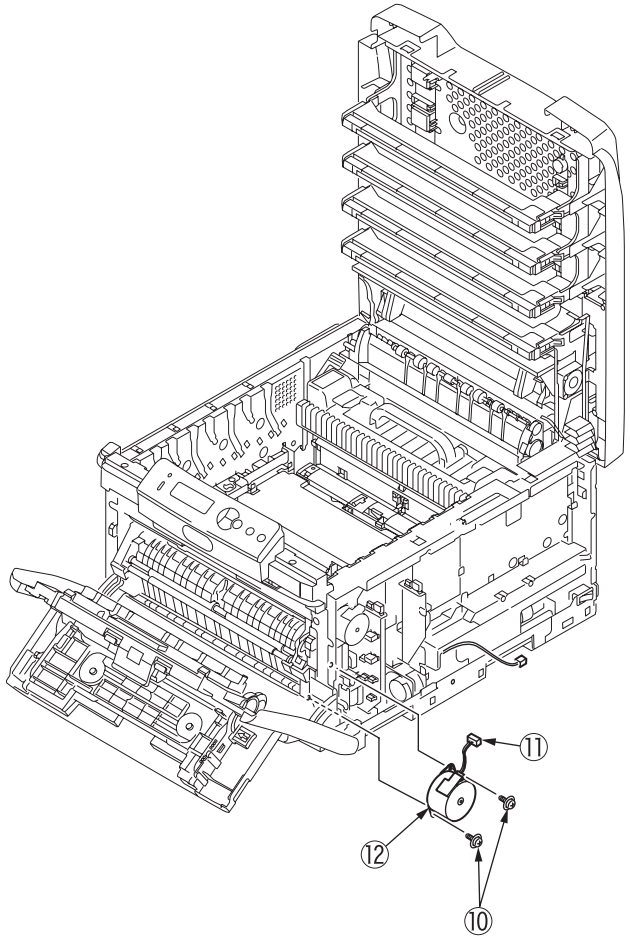
(5) Remove the five screws (silver-colored) ⑥ to detach the main controller PCB ⑦.



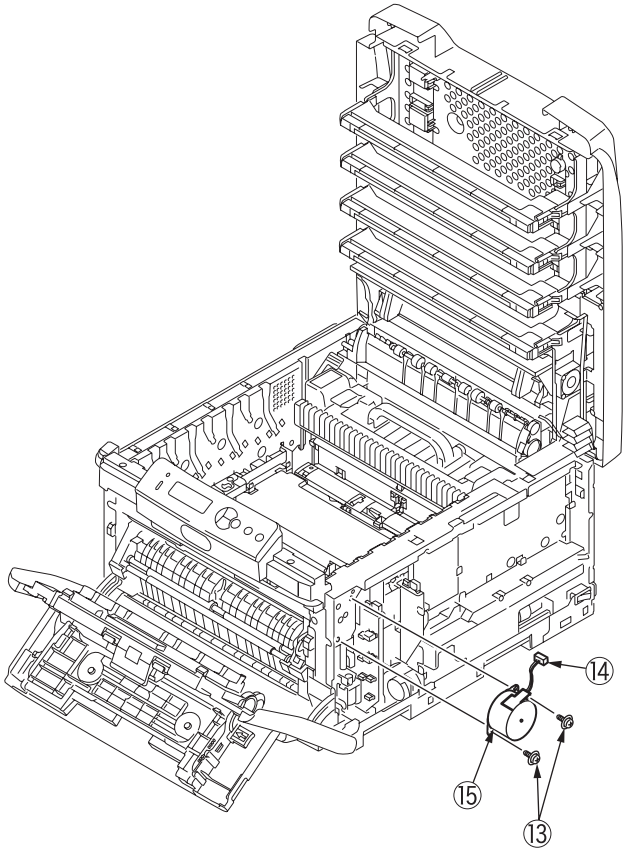
(6) Remove the four screws (silver-colored) ⑧ to detach the image drum motor ⑨ (tool number 1).



(7) Remove the two screws (silver-colored) ⑩ and the cable ⑪ to detach the feed motor ⑫.



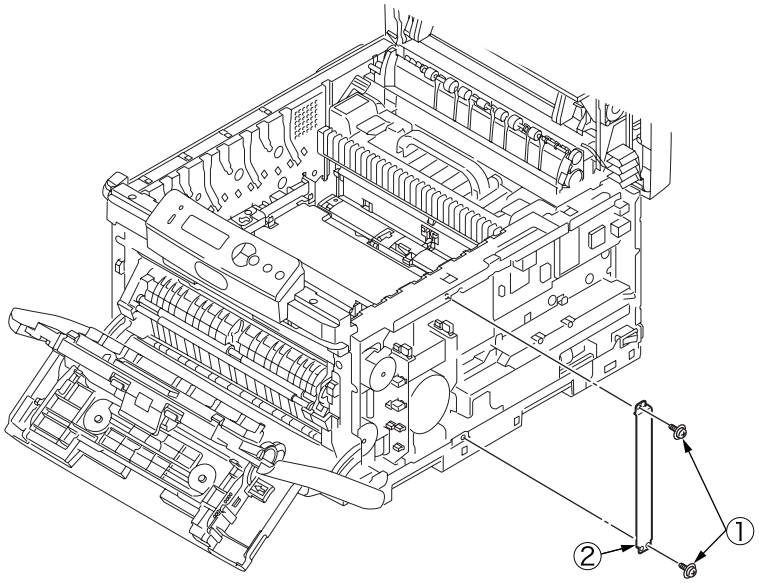
(8) Remove the two screws (silver-colored) ⑬ and the cable ⑭ to detach the image drum lift-up motor ⑮.



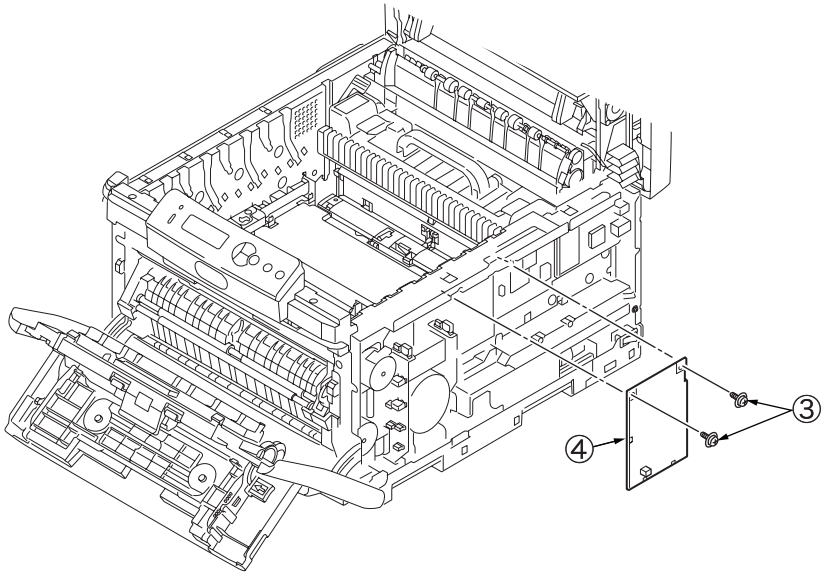
4.2.8 Print engine controller PCB

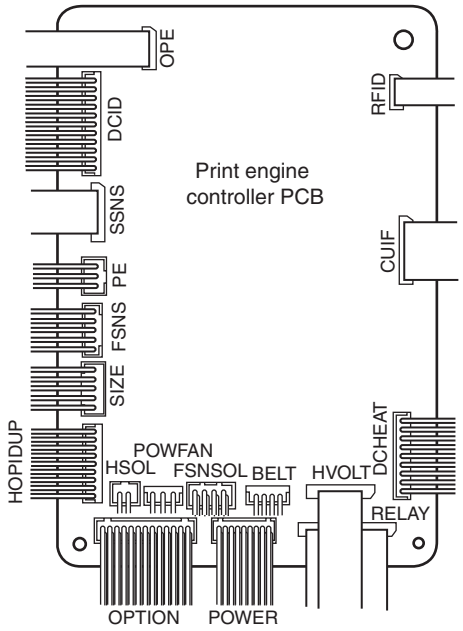
(1) Remove the plate shield Assy. (see section 4.2.7, (1) through (3)).

(2) Remove the two screws (silver-colored) ① and the reinforcement plate ②.



(3) Remove the all the connectors and the two screws (silver-colored) ③ to detach the print engine controller PCB ④ (tool number 1).





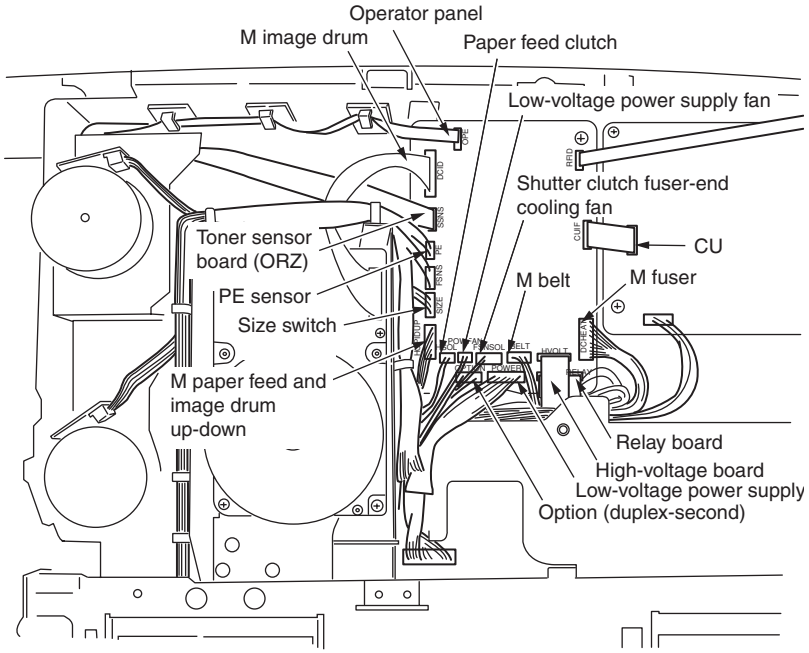


Figure 4-2-8-1: Print engine controller PCB cable routing diagram

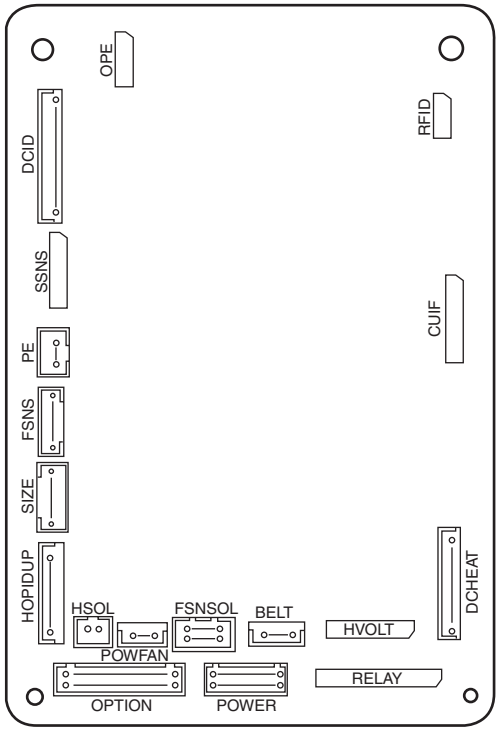


Figure 4-2-8-2: Print engine controller PCB connection diagram

4.2.9 Top cover Assy.

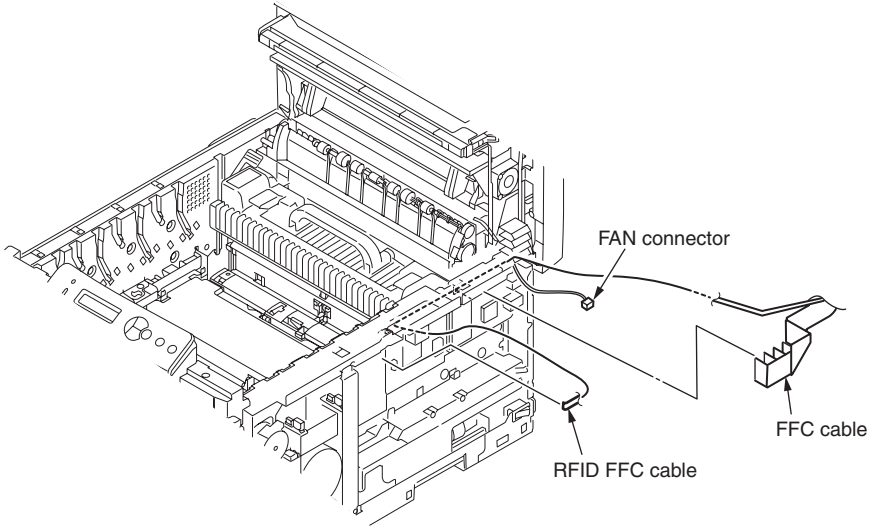
(1) Remove the left side cover (see section 4.2.3).

(2) Remove the right side cover (see section 4.2.4).

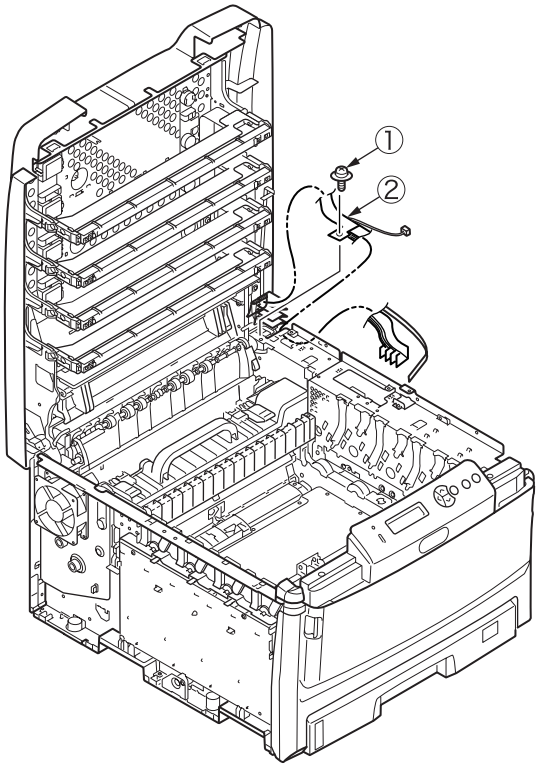
(3) Remove the rear cover Assy. (see section 4.2.5).

(4) Remove the plate Assy. shield (see section 4.2.6).

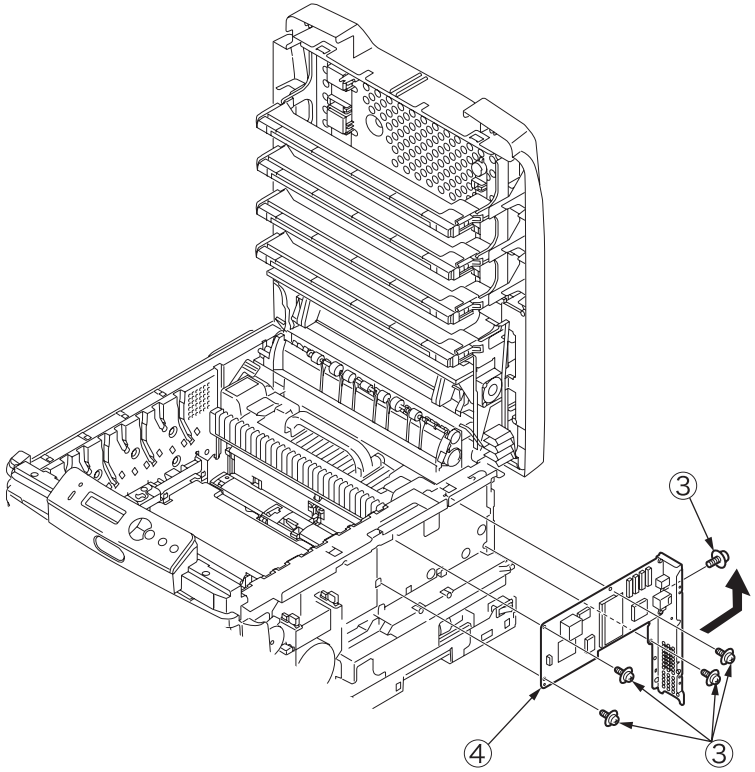
(5) Remove the four FFC cables, the RFID FFC cable and the fan connector.



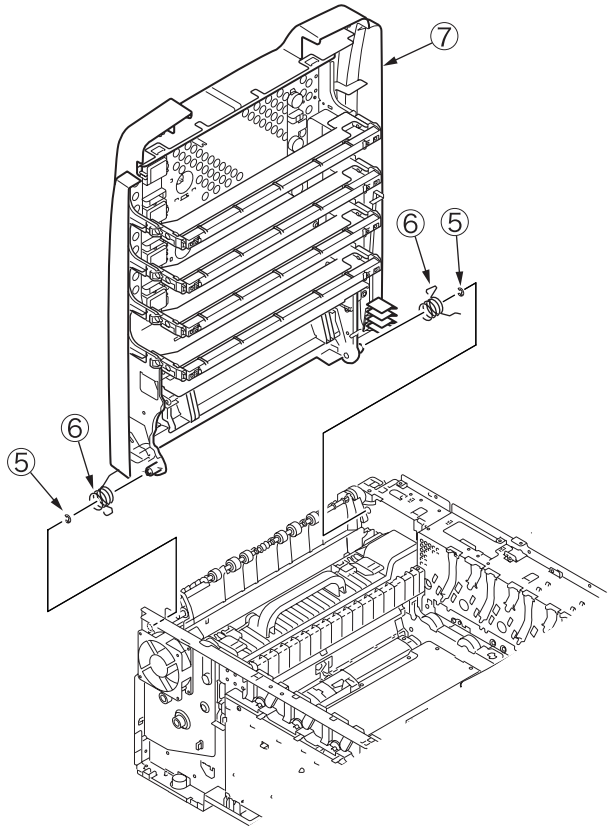
(6) Remove the screw (silver-colored) ① and the cable Assy.-LED heads ② (tool number 1).



(8) Remove the five screws (silver-colored) ③ and slide out the main controller PCB Assy.④ rearward (tool number 1) (see section 4.2.7, (7)).



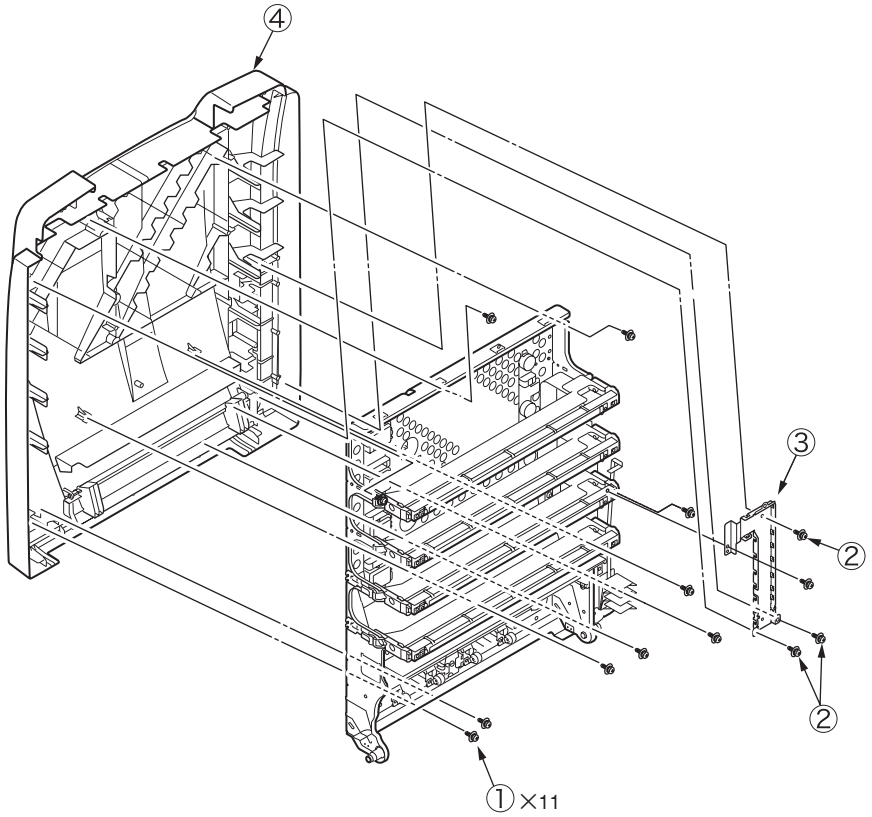
(9) Remove the screw (silver-colored), the two E-shaped retainer rings ⑤ and the two torsion springs ⑥ to detach the top cover Assy.⑦.



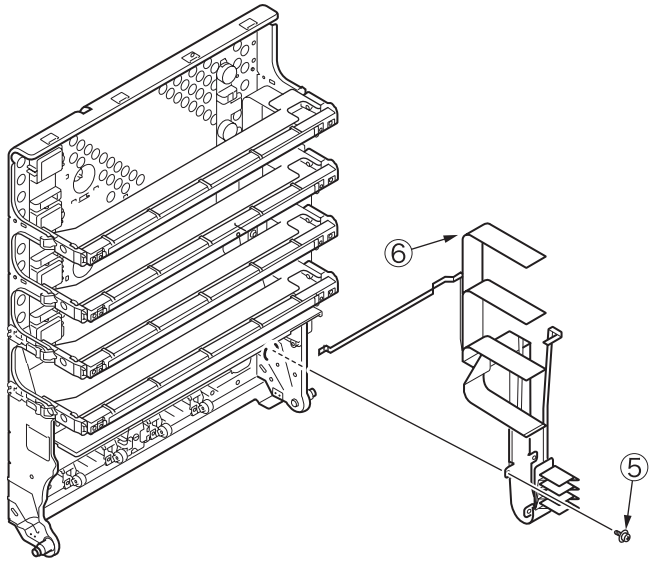
4.2.10 Top cover

(1) Remove the top cover Assy. (see section 4.2.9).

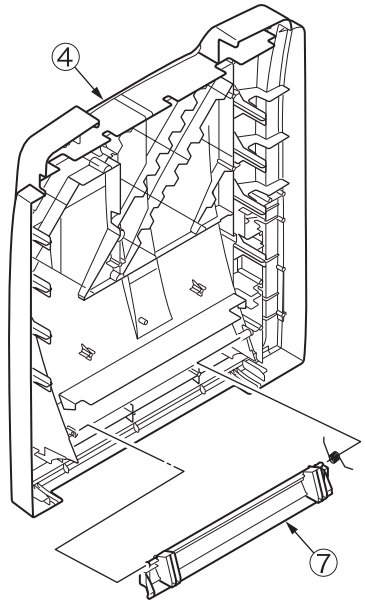
(2) Remove the eleven screws (black) ①, the three screws (black) ②, cable cover ③ and top cover ④. (tool number 1)



(3) Remove the screw ⑤ and the cable Assy.-LED heads⑥.
Remove the film contact.



(4) Warp and remove the auxiliary top cover ⑦.



4.2.11 Operator panel Assy.

(1) Open the top cover.

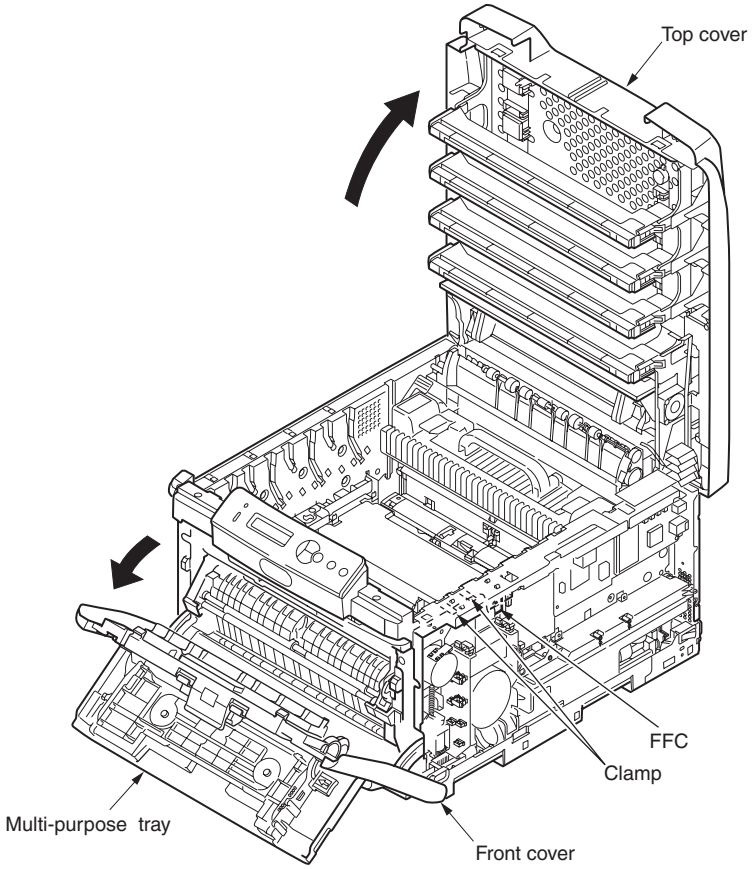
(2) Open the multi-purpose tray.

(3) Open the front cover.

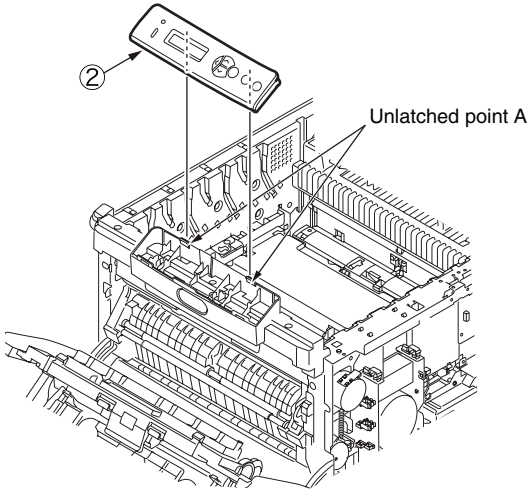
(4) Remove the left and right side covers (see sections 4.2.3 and 4.2.4).

(5) Remove the plate shield Assy. (see section 4.2.7, (2)).

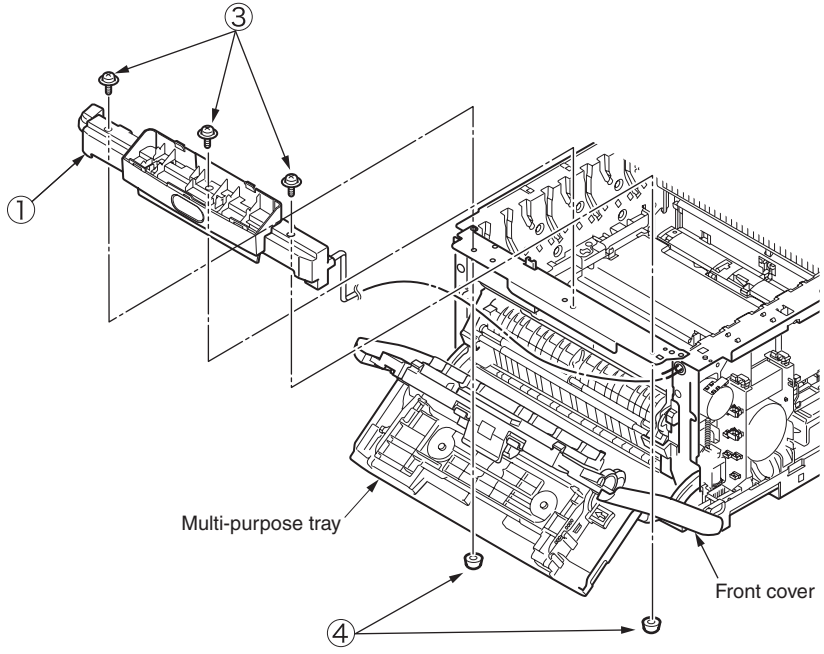
(6) Detach and unclamp (at the two points) the FFC of the operator panel Assy.①.



(7) Unlatch the operator panel cover Assy. at the two points A to remove it and, at the same angle as shown left below, remove the operator panel cover②.

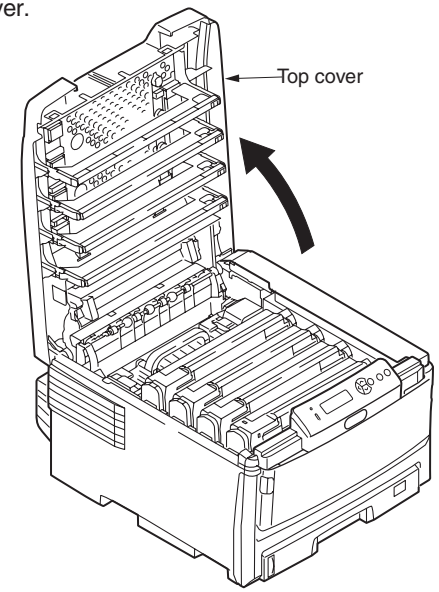


(8) Remove the three screws (silver-colored) ③ to detach the operator panel Assy. ① (tool number 1). Be careful about a potential drop of the (black) cap④.

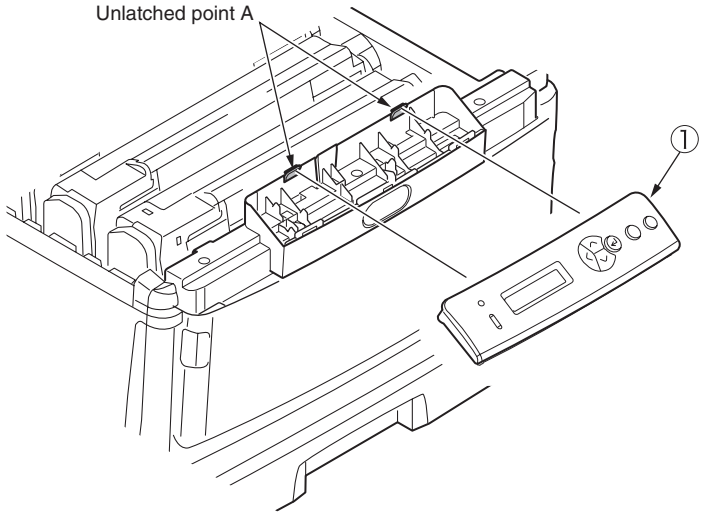


4.2.12 Board PRP

(1) Open the top cover.



(2) Unlatch the operator cover Assy. ① at the two points, remove the FFC and the Assy.



(3) As shown in diagram (2), unlatch the operator panel cover Assy. at the three points B, remove the board PRP ②, the LCD button ③ and the button key ④.

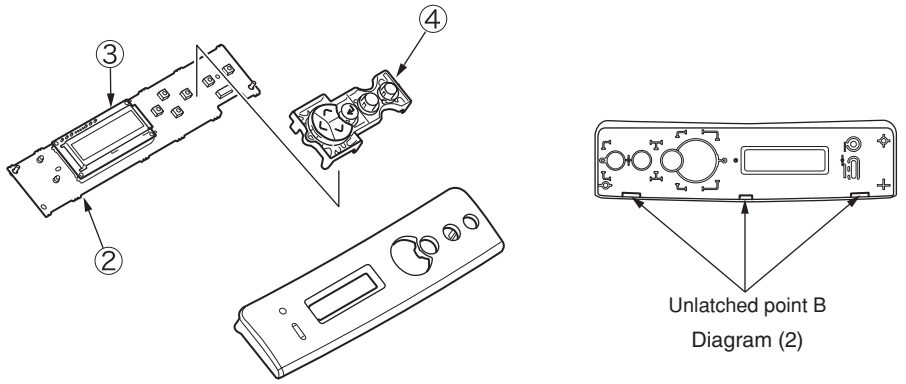
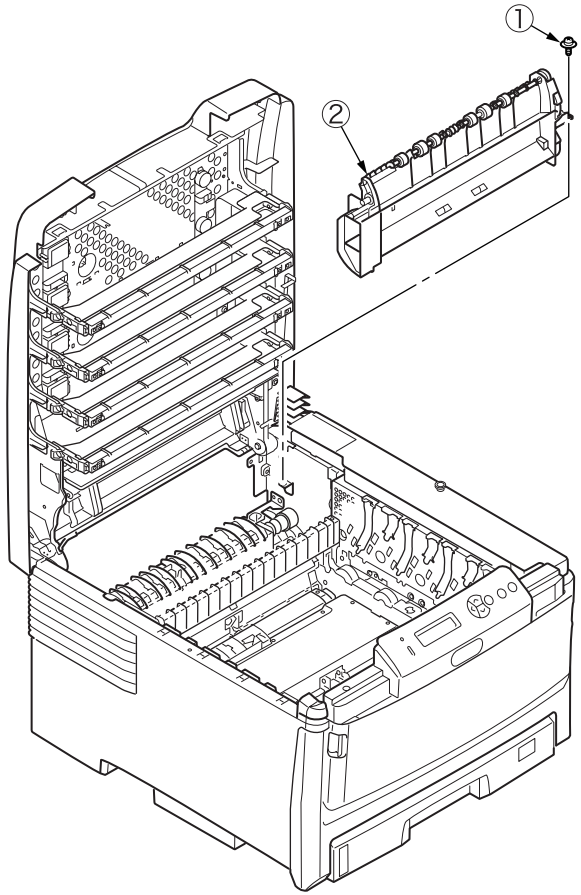


Diagram (2)

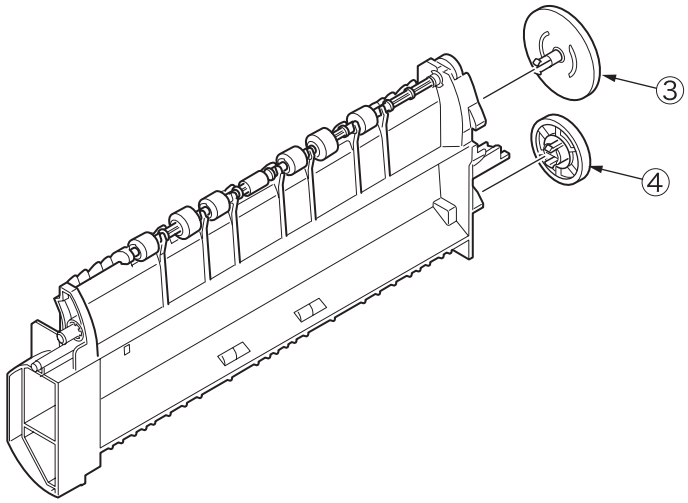
4.2.13 Shaft-ejection Assy. (FU) and shaft-ejection Assy. (FD)

(1) Remove the rear cover Assy. (see section 4.2.5).

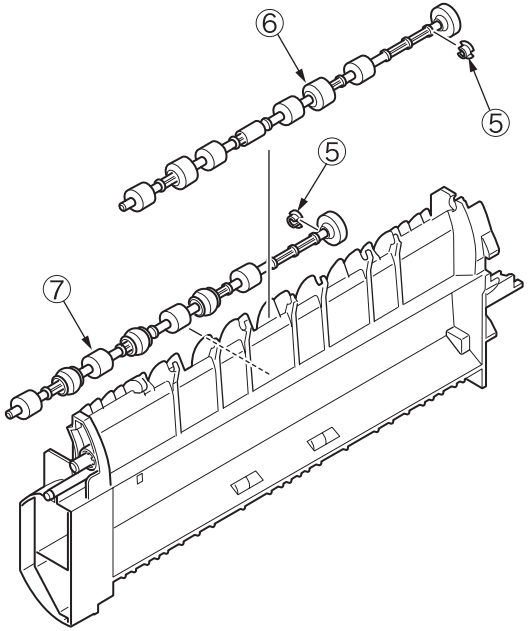
(2) Remove the screw (silver-colored) ① to remove the guide-ejection-Assy.-upper② .



(3) Remove the gears-idler-ejection ③ and ④.



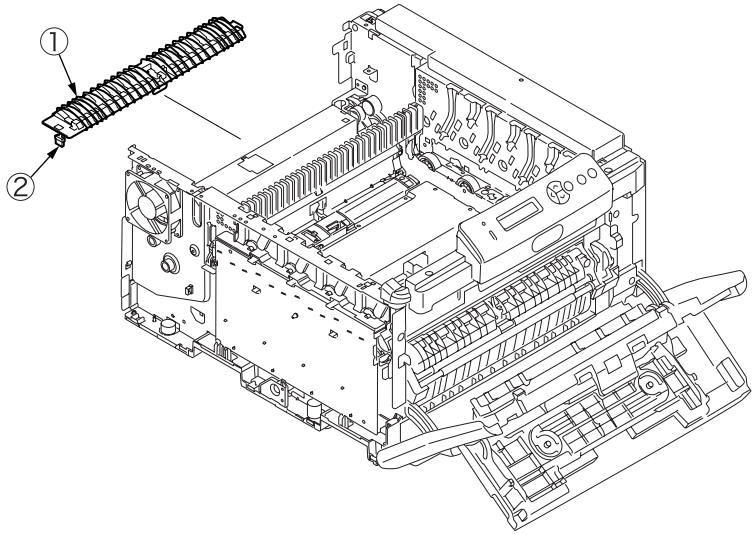
(4) Remove the two molded E-shaped rings ⑤ and warp and detach the shaft-ejection Assy. (FU)⑥ and the shaft-ejection Assy. (FD)⑦ .



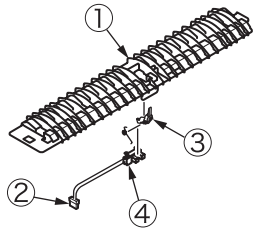
4.2.14 Guide-ejection Assy.-lower, color-registration Assy. and relay board (P6Y)

(1) Remove the left side, right side and rear covers, the top cover Assy., the print engine controller PCB and the guide-ejection Assy.-upper (see sections 4.2.3, 4.2.4, 4.2.5, 4.2.8, 4.2.9 and 4.2.13).

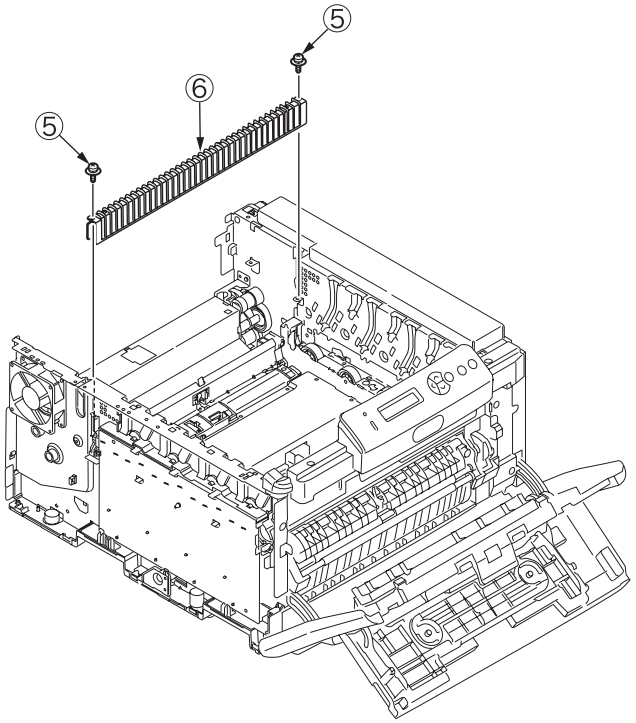
(2) Slide out the guide-ejection-lower ① to the left and remove the connector ②.



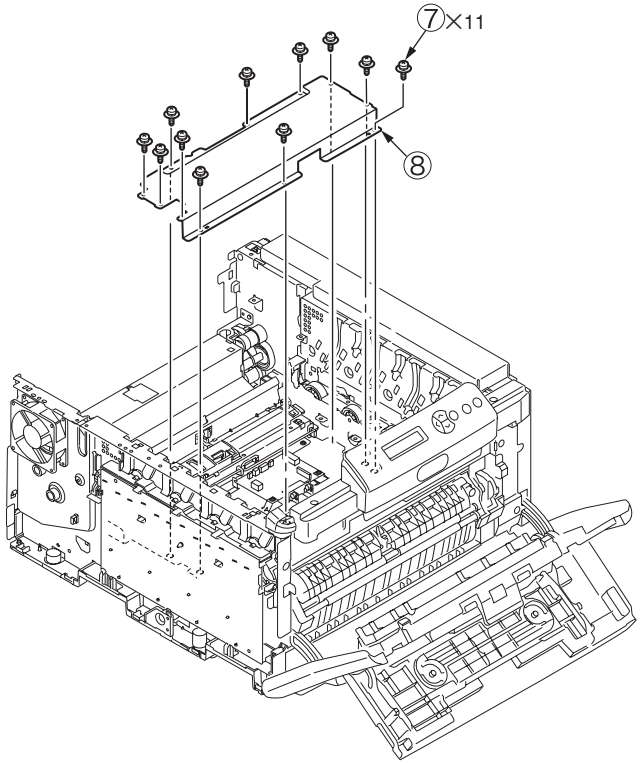
(3) Remove the lever-ejection sensor ③ and the ejection sensor ④.



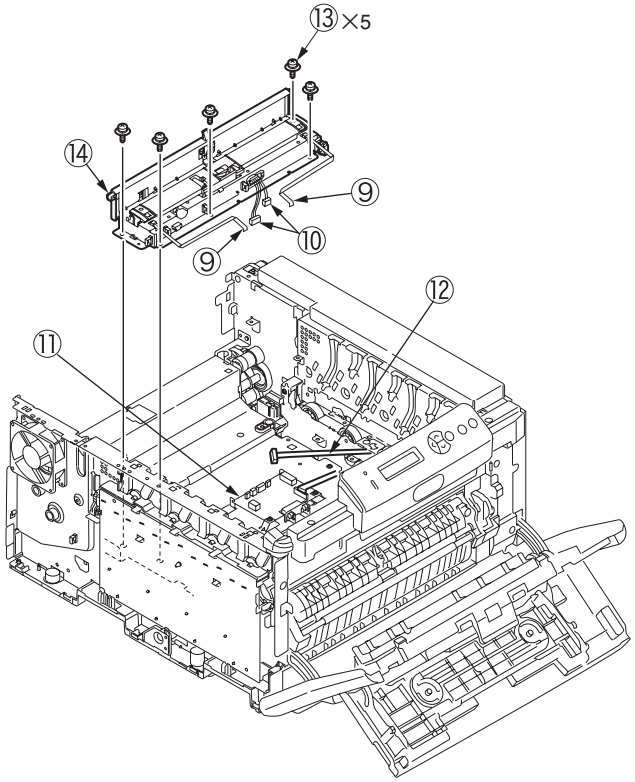
(4) Remove the two screws (silver-colored) ⑤ to remove the auxiliary Assy.⑥ .



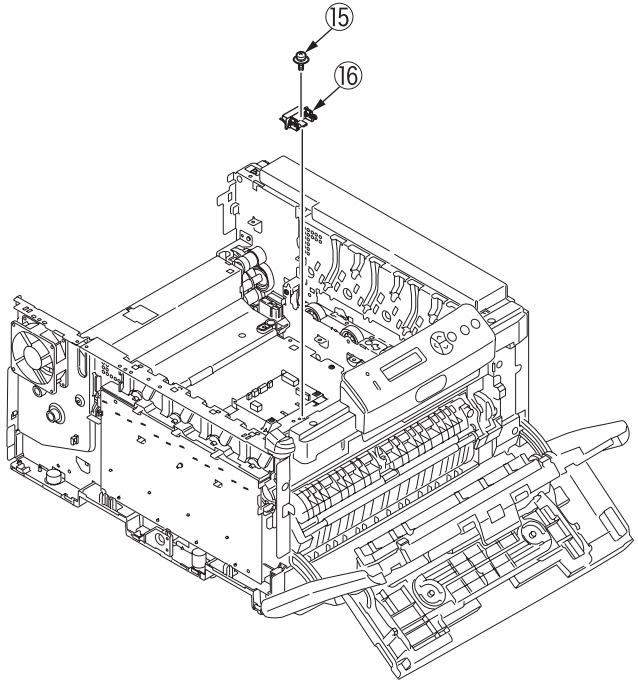
(5) Remove the eleven screws (silver-colored)⑦ to remove the cover plate⑧.



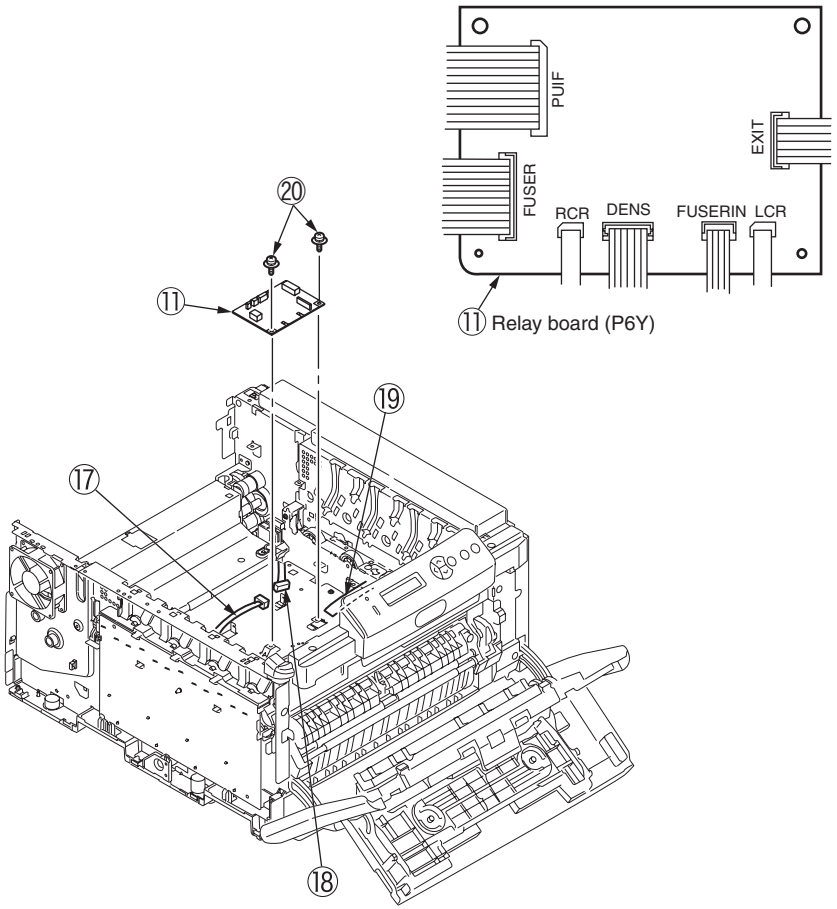
(6) Remove the right and left FFC connectors ⑨ and the two connectors ⑩ from the relay board (P6Y) ⑪, and the connector ⑫ from the color-registration Assy ⑭. Remove the five screws (silver-colored)⑬ to detach color-registration Assy.⑭.



(7) Remove the screw (silver-colored) ⑮ to remove the contact Assy. ⑯ (tool number 1).



(8) Remove the two connectors ⑰ and ⑱, and the FFC connector ⑲ and the two screws (silver-colored) ⑳ to detach the relay board (P6Y) ⑪. (tool number 1)



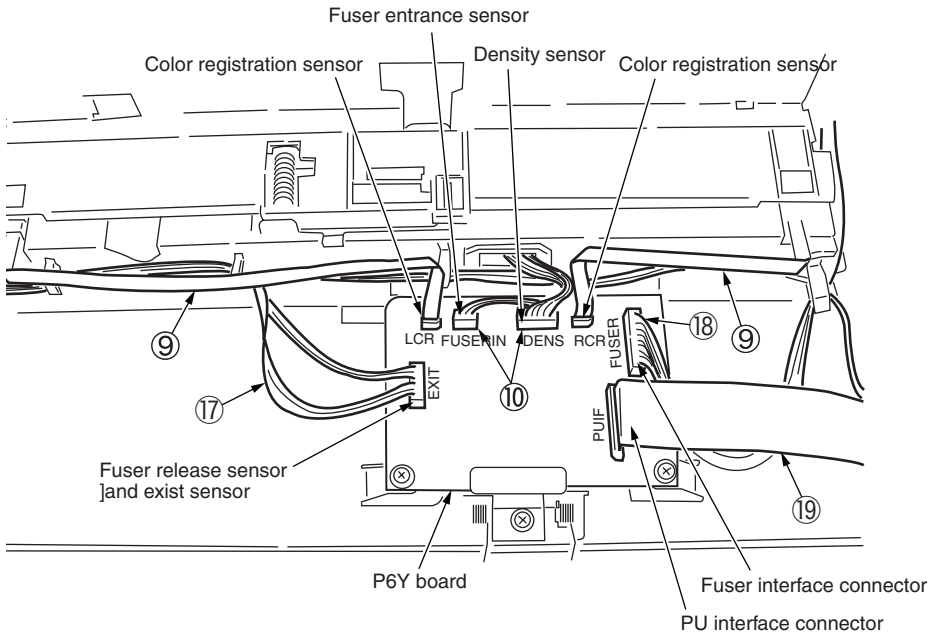


Figure 4-2-14-11: Relay board (P6Y) cable routing diagram

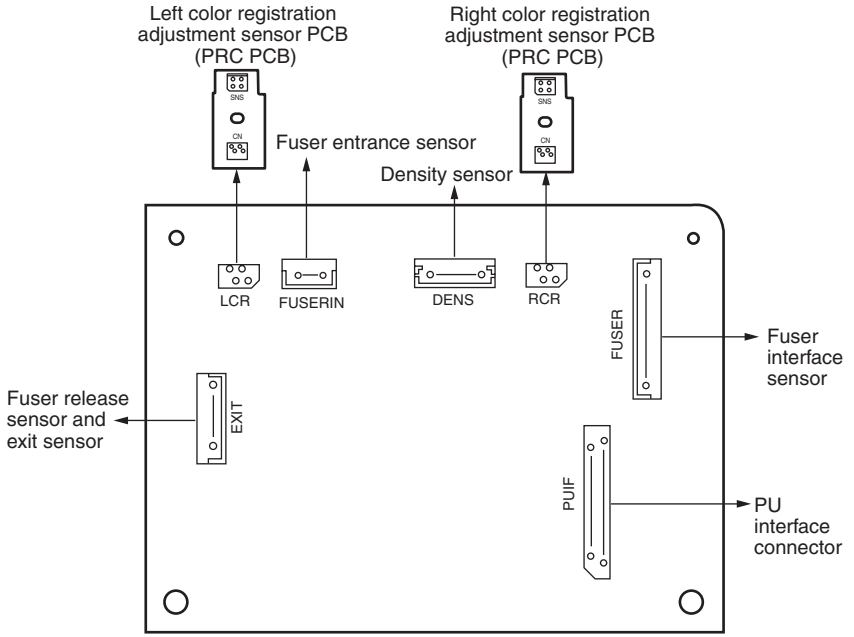
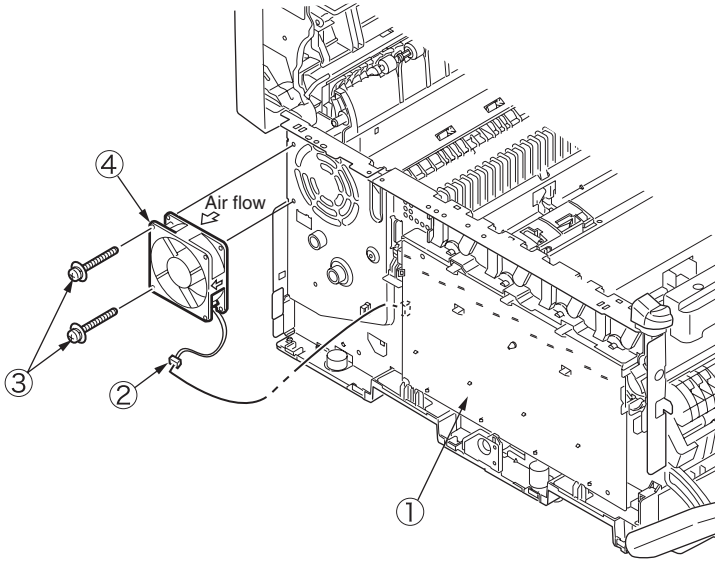


Figure 4-2-14-2: Relay board (P6Y) connection diagram

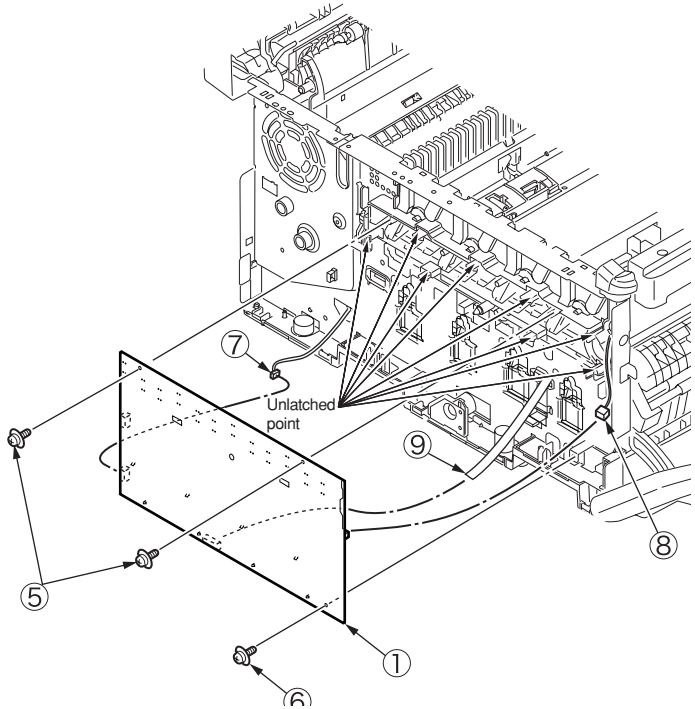
4.2.15 Fan (fuser), high-voltage power supply board, contact Assy., fuser sensor Assy.

(1) Remove the left side cover (see section 4.2.3).

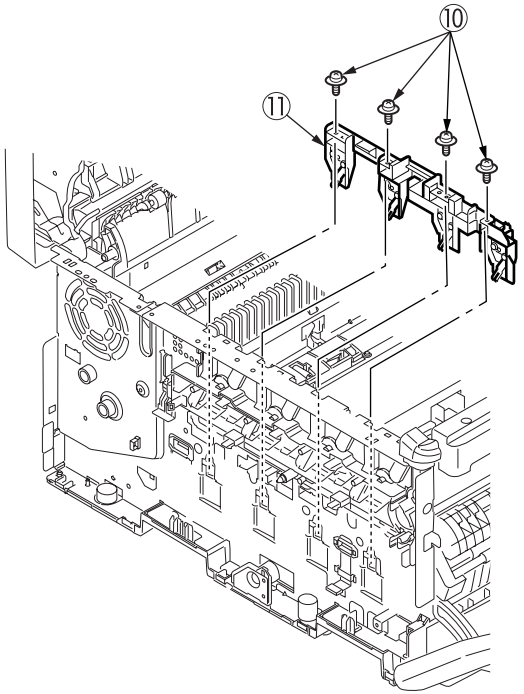
(2) Pull out the connector ② from the high-voltage power supply board ①, and remove the two screws (silver-colored) ③ to detach the fan ④ (tool number 1).



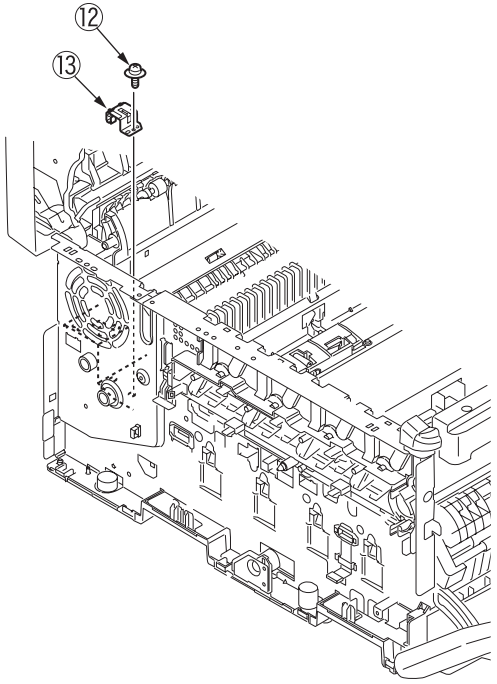
(3) Remove the two screws (black) ⑤ and the screw (silver-colored) ⑥, unlatch the high-voltage power supply board ① at the eight points, remove the belt thermistor connector ⑦, the cover-open sensor connector ⑧ and the FFC connector ⑨ and detach the high-voltage power supply board ①.



(4) Remove the four screws (silver-colored) ⑩ to detach the contact Assy.⑪ .



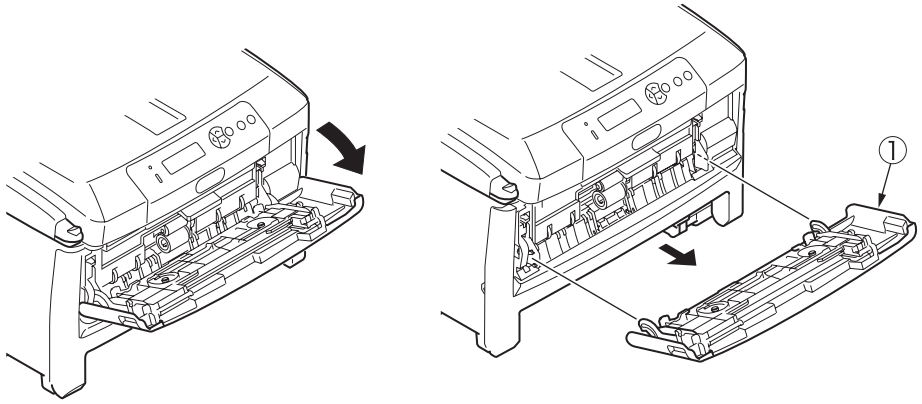
(5) Remove the screw (silver-colored) ⑫ to remove the fuser sensor Assy. ⑬ (tool number 1).



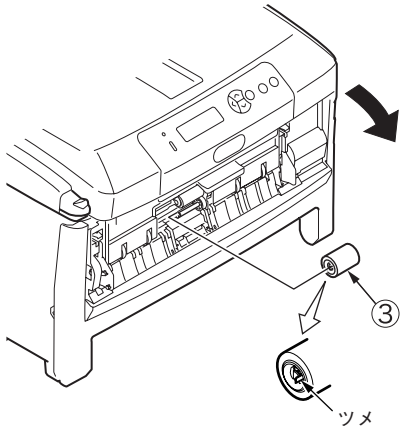
4.2.16 MPT Assy., MPT hopping roller, separator and pick-up roller

(1) Remove the paper cassette.

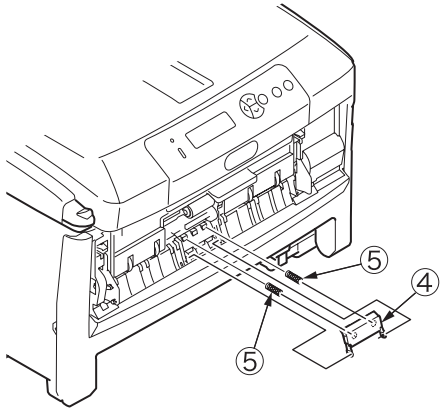
(2) Open the multi-purpose tray, warp and remove the stay on each side and detach the MPT Assy.①.



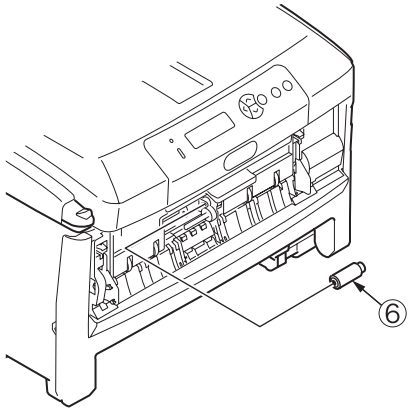
(3) Lift the pick-up Assy. and, bowing the lug of the paper feed roller ③, slide the roller to the left to detach the roller.



(4) Turn the separator Assy. frontward around its two support points to disengage the Assy. at the points to detach the separator④ and the two springs⑤.



(5) Warping the side of the frame, detach the pick-up roller ⑥.



4.2.17 Registration roller Assy.

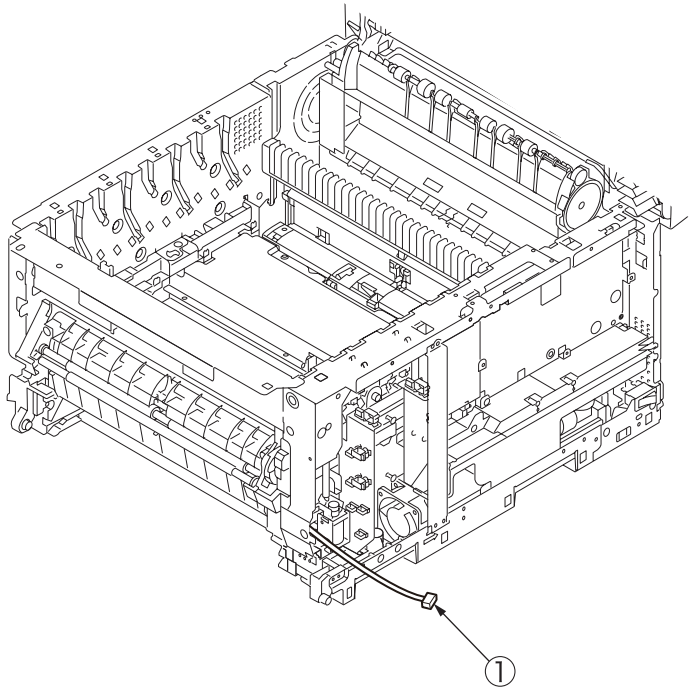
(1) Remove the operator panel Assy. (see section 4.2.11).

(2) Remove the motor (see section 4.2.7, (8)).

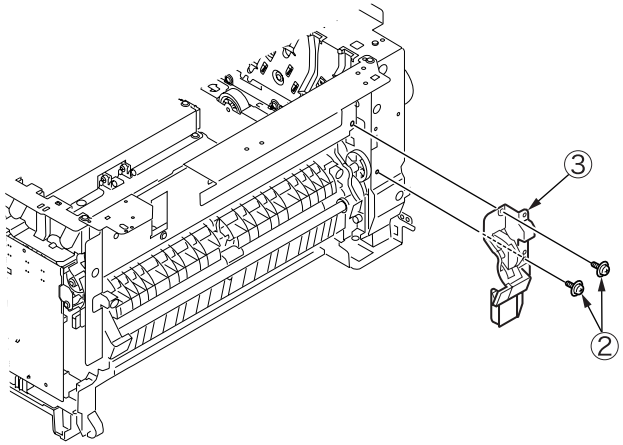
(3) Remove the left side cover (see section 4.2.3).

(4) Remove the MPT Assy. (see section 4.2.16, (2)).

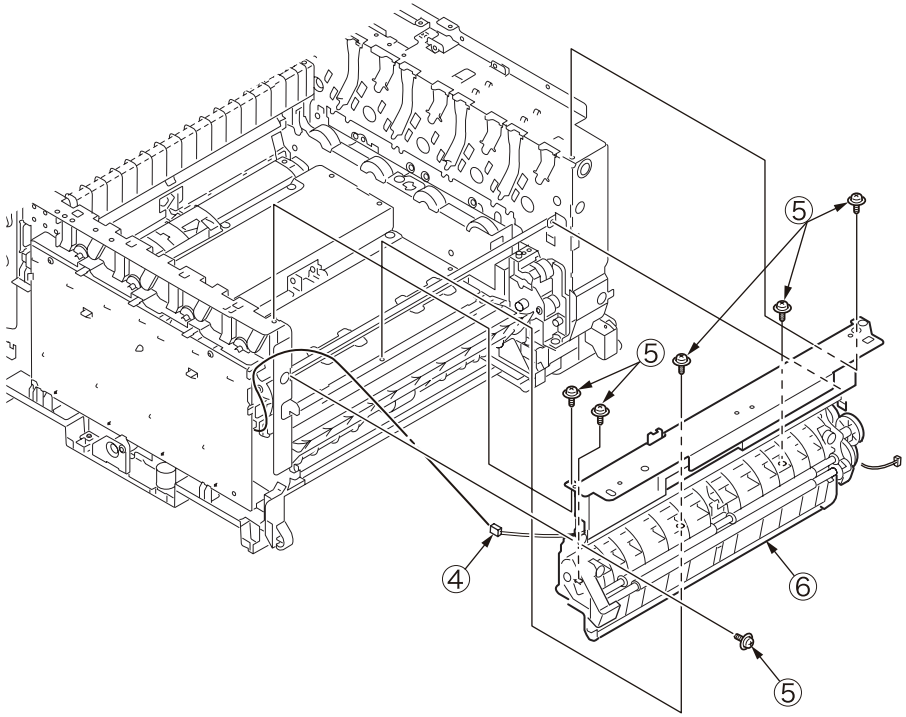
(5) Unplug the cable ①.



(6) Remove the two screws (silver-colored) ② to remove the gear cover③.



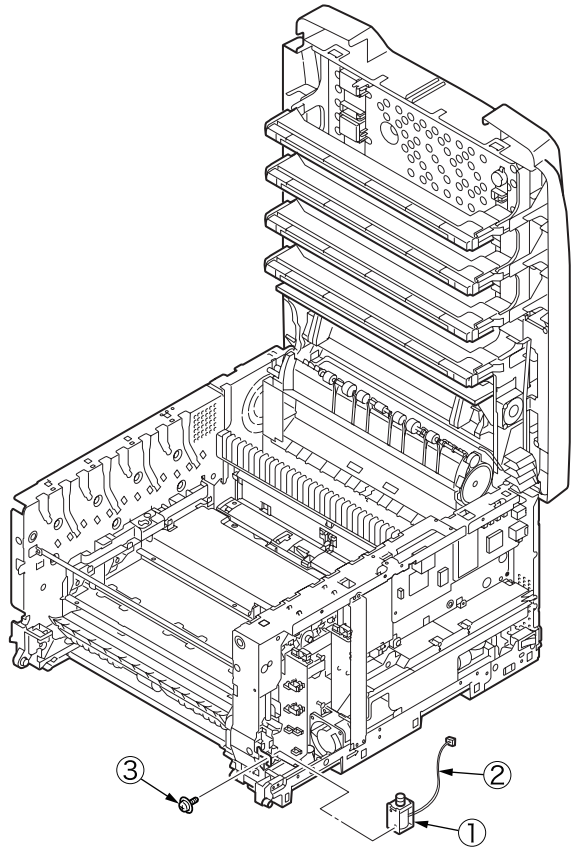
(7) Remove the connector ④ from the high-voltage board, remove the six screws (silver-colored) ⑤ and, as shown, pull out the registration roller Assy ⑥.



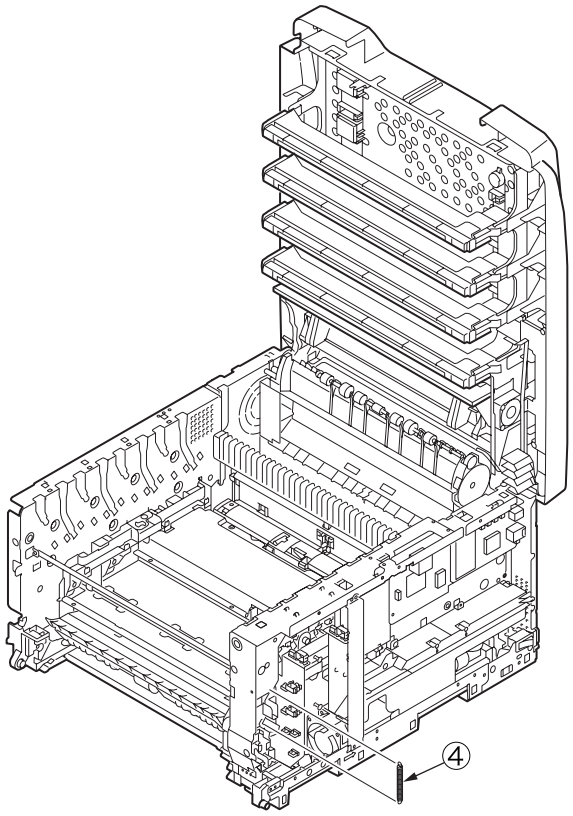
4.2.18 Gear box, registration/hopping roller Assy. and solenoid

(1) Remove the registration roller Assy. (see section 4.2.17).

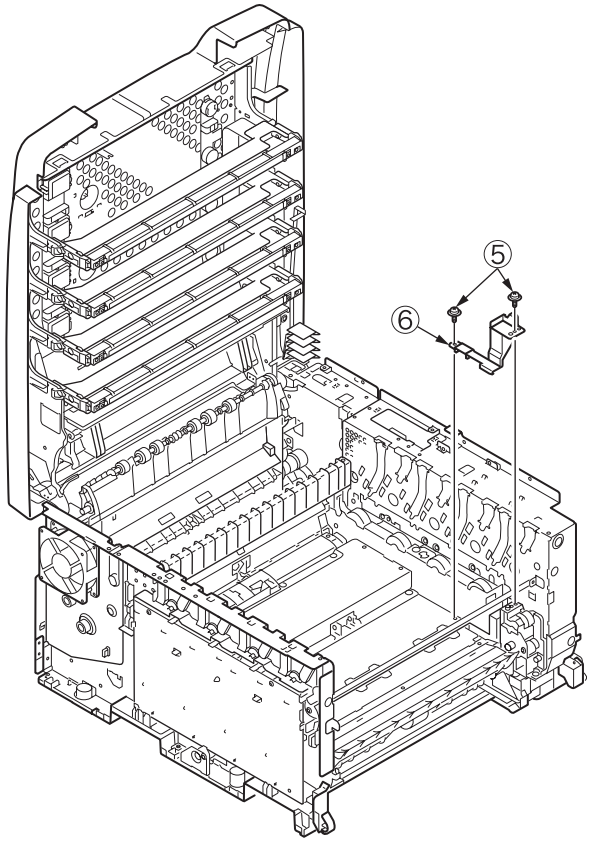
(2) Unclamp the cable ② from the solenoid ① and remove the screw (silver-colored) ③ to detach the solenoid.



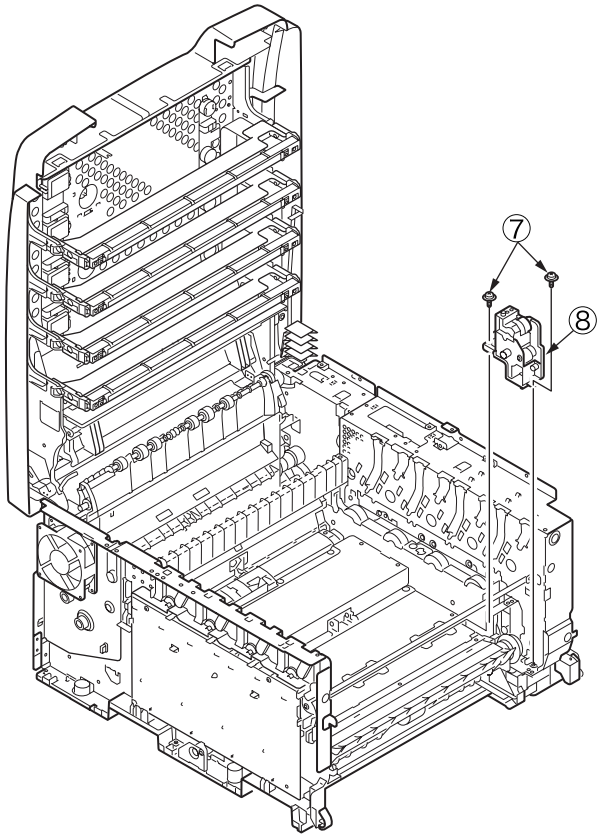
(3) Remove the screw ④.



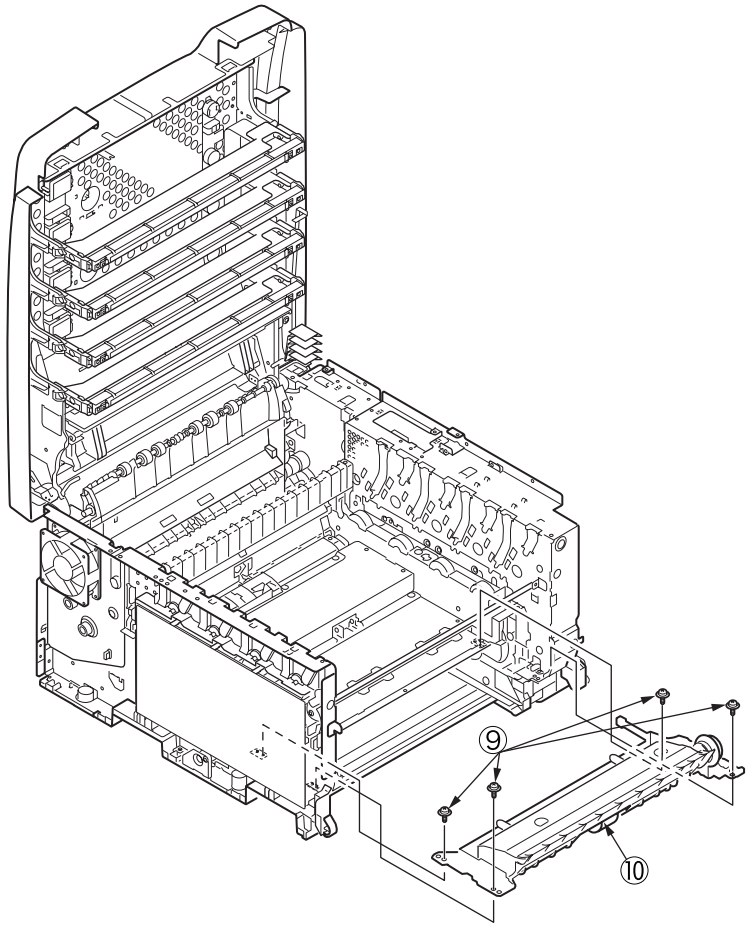
(4) Remove the two screws (silver-colored) ⑤ to remove the cable cover ⑥.



(5) Remove the two screws (silver-colored) ⑦ and lift out the gear box ⑧.



(6) Remove the four screws (silver-colored) ⑨, and pull up the hopping roller Assy. ⑩ toward the front of the printer (tool number 1).



4.2.19 Holder-switch Assy., low-voltage power supply fan and low-voltage power supply

⚠Warning	Electric shock hazard.	

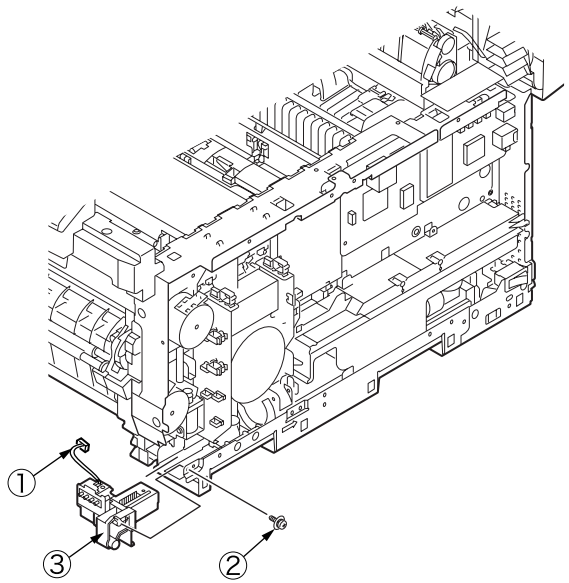
When replacing the low-voltage power supply, due to potential electric shock, wear insulated gloves or be careful not to touch the conductors or terminals of the power supply directly.

After the AC cord is unplugged, the capacitor may take about one minute to discharge completely, or could not discharge due to PCB breakdown. Use caution about electric shock.

(1) Remove the plate shield Assy. (see section 4,2,7, (1) to (3)).

(2) Remove the MPT Assy. (see section 4.2.16, (2)).

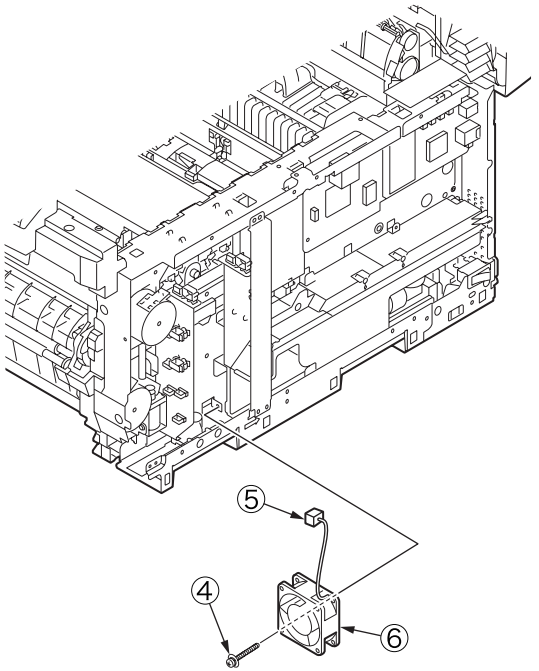
(3) Remove the connector ① and the screw (black) ② to detach the holder-switch Assy ③.



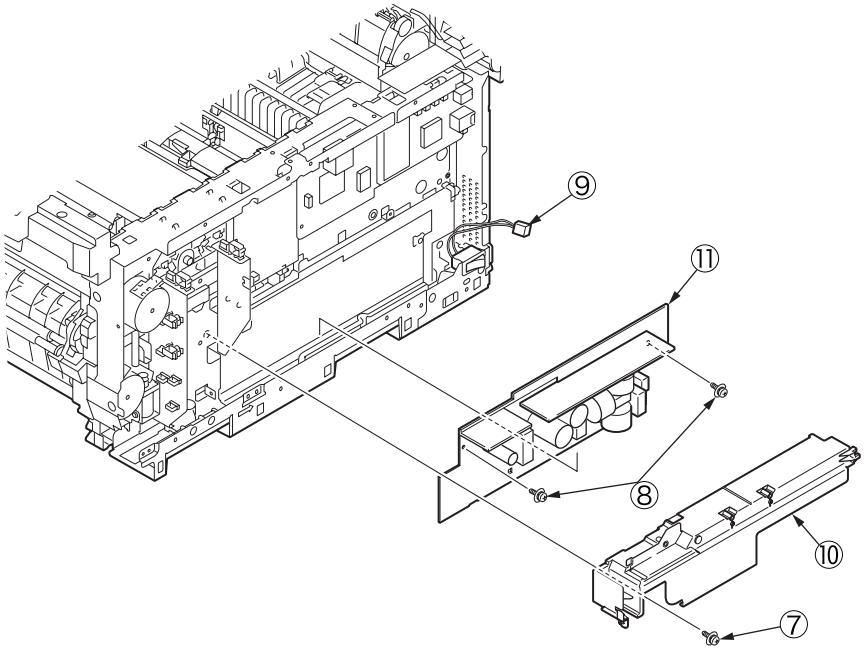
(4) Remove the image drum motor (see section 4.2.7, (6)).

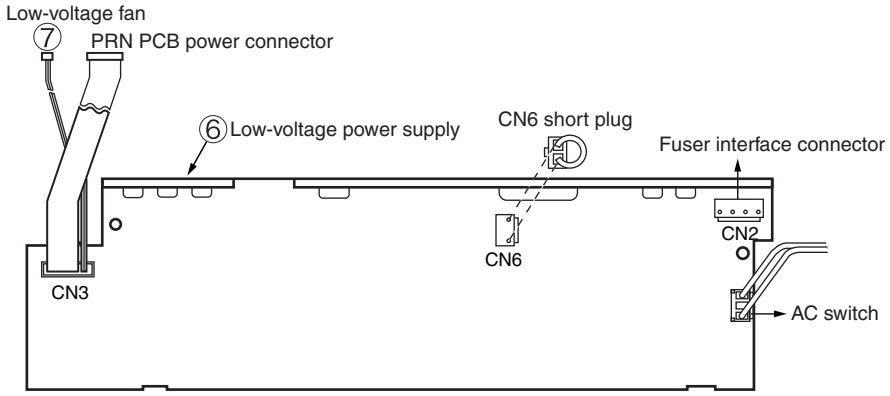
(5) Remove the reinforcement plate (see section 4.2.8, (2)).

(6) Remove the screw (silver-colored) ④ and the connector ⑤ to detach the low-voltage power supply fan ⑥.



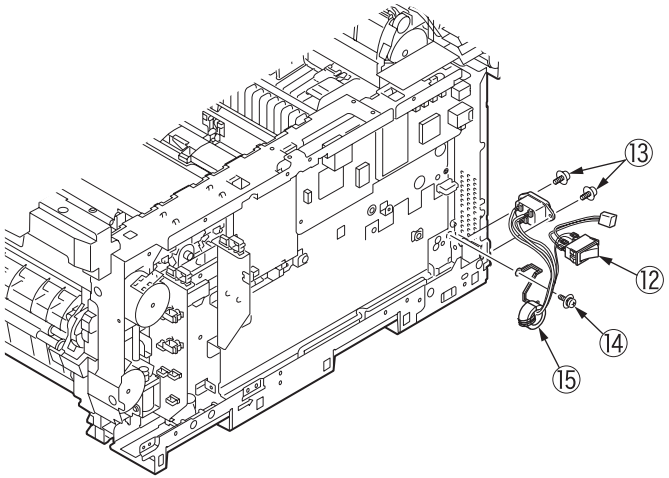
(7) Remove the screw (silver-colored) ⑦, the two screws (silver-colored) ⑧, the AC cord connector ⑨ and the power supply cover ⑩ to detach the low-voltage power supply ⑪.





Note! CN6: AC input voltage setting switch connector
100V short plug contained but 230V short plug not contained.

(8) Remove the AC switch ⑫, the two screws (silver-colored) ⑬, the ground screw ⑭ and the AC power supply cable ⑮.

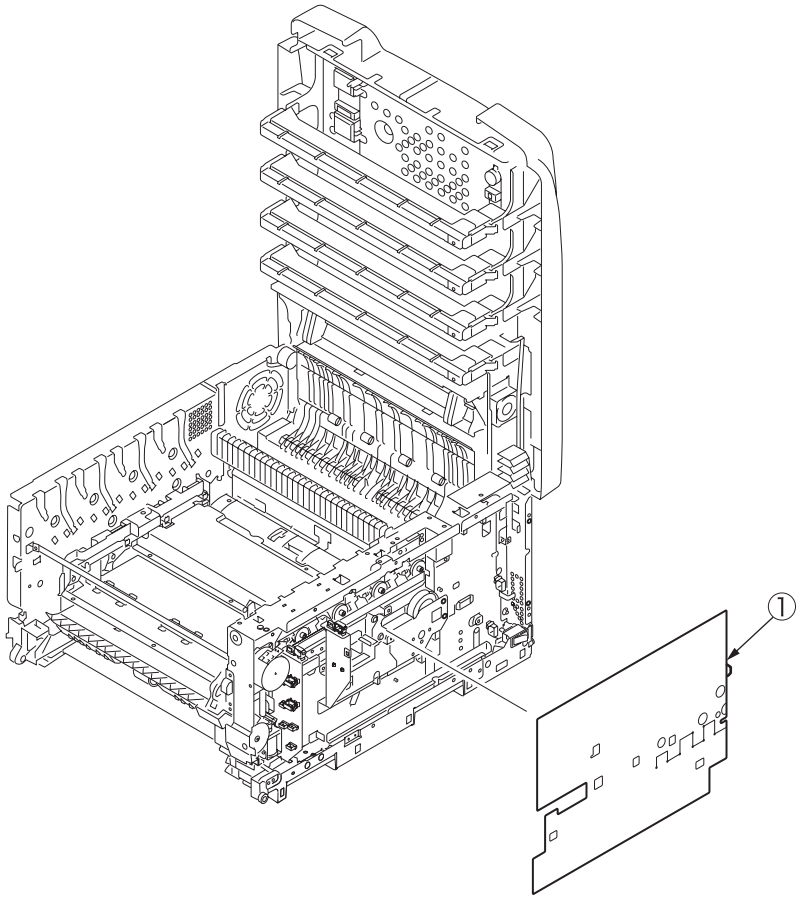


4.2.20 Belt motor Assy. and fuser motor Assy.

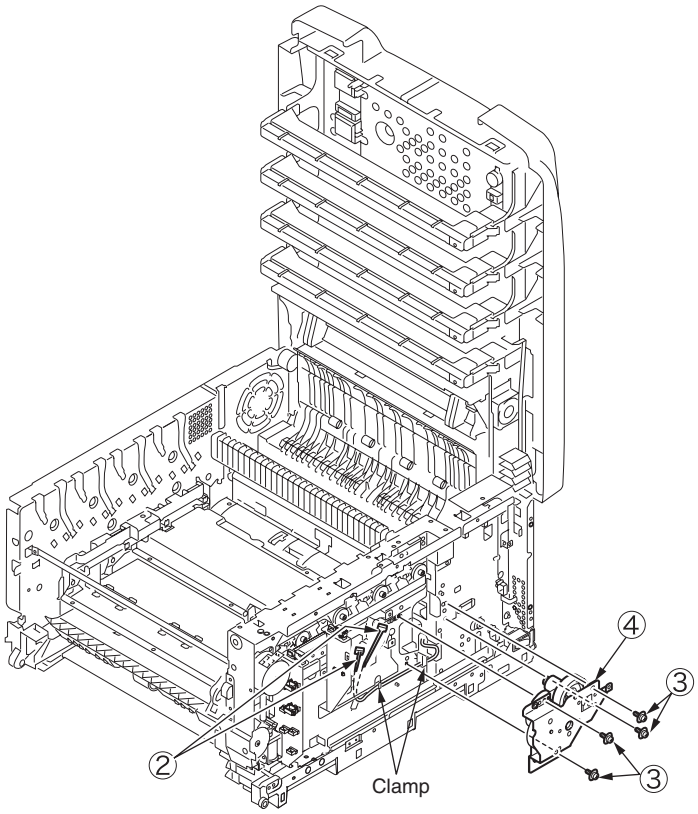
(1) Remove the main control PCB, print engine roller PCB (see sections 4.2.7 and 4.2.8).

(2) Remove the low-voltage power supply (see section 4.2.19, (7)).

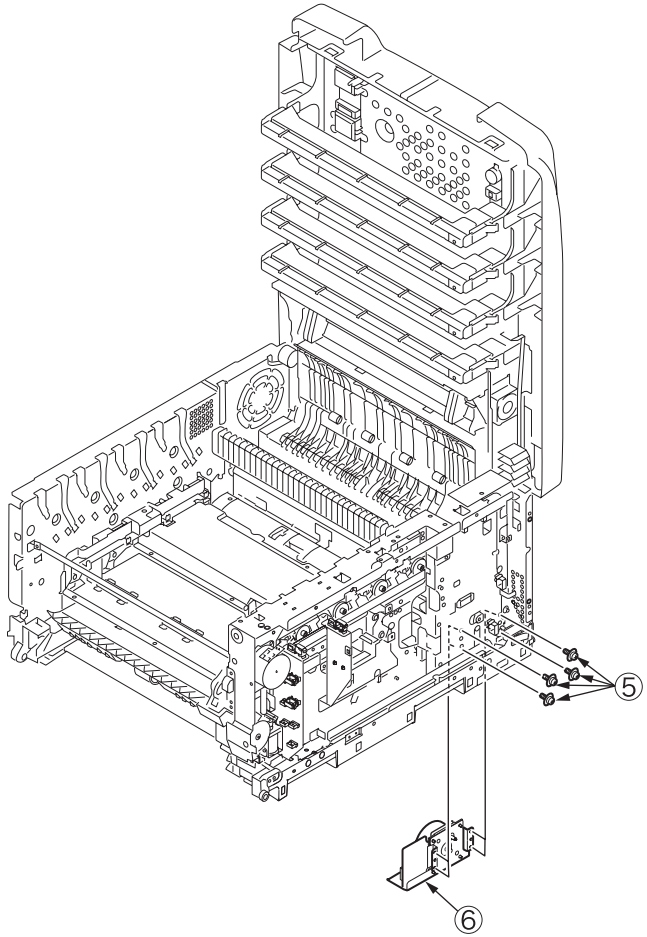
(3) Remove the insulator ①.



(4) Unclamp the two cables ② and, to detach the belt motor Assy. ④ remove the four screws (silver-colored) ③ of which brackets are marked with a number 2 in a rectangle (2).



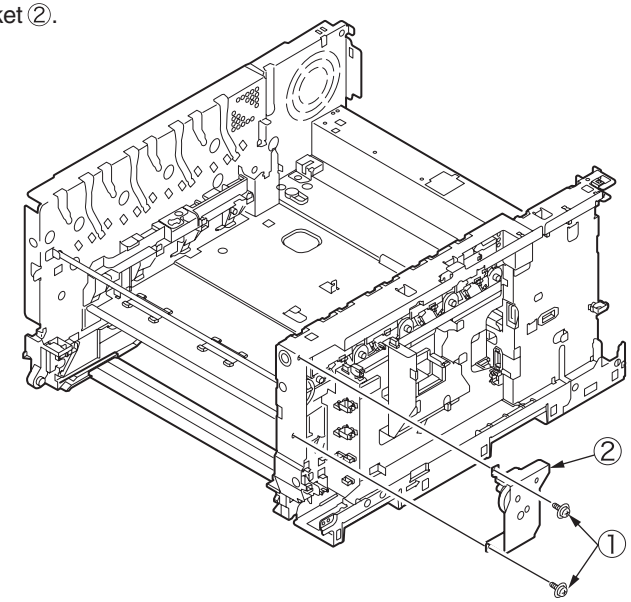
(5) Remove the four screws (silver-colored)⑤ to detach the fuser motor Assy.⑥ .



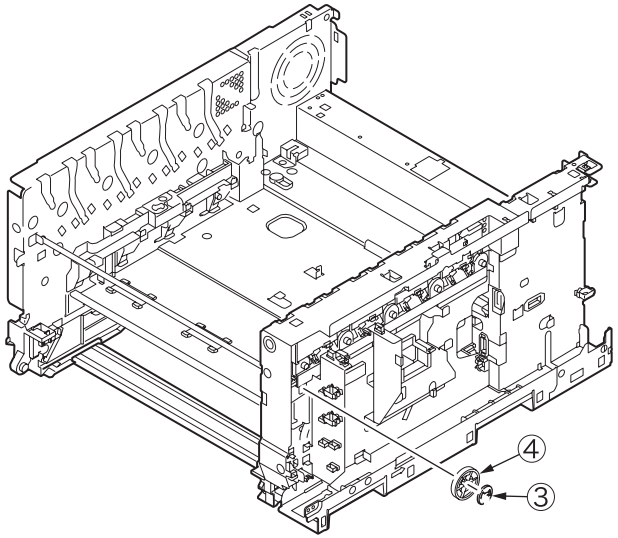
4.2.21 Side-R Assy. and side-L Assy.

(1) See sections 4.2.1 to 4.2.20.

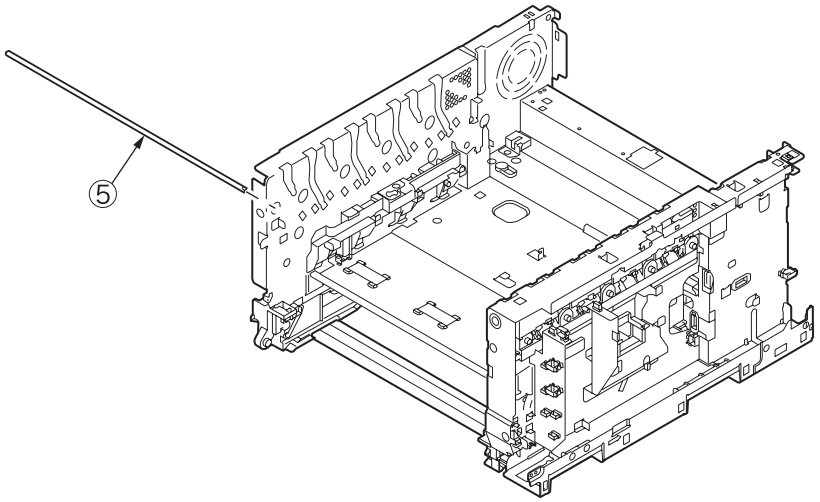
(2) Remove the two screws (silver-colored) ① to remove the image drum lift-up gear bracket ②.



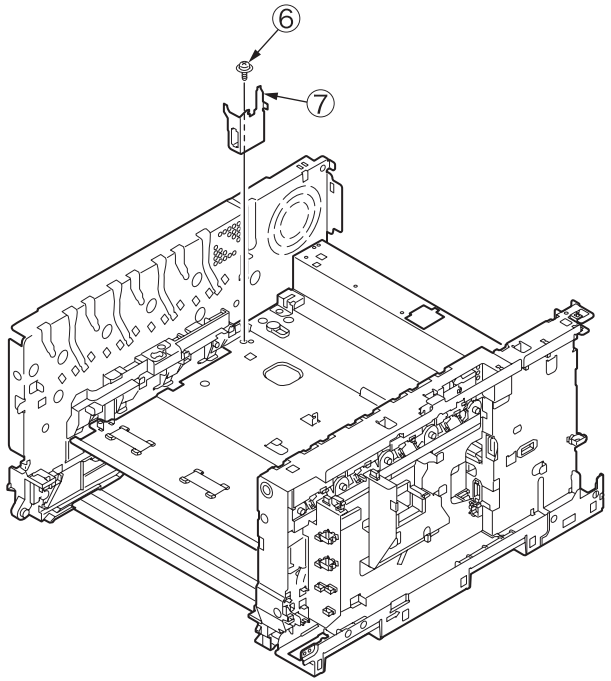
(3) Remove the E-shaped ring ③ and the image drum lift-up gear (R) ④ (tool number 8).



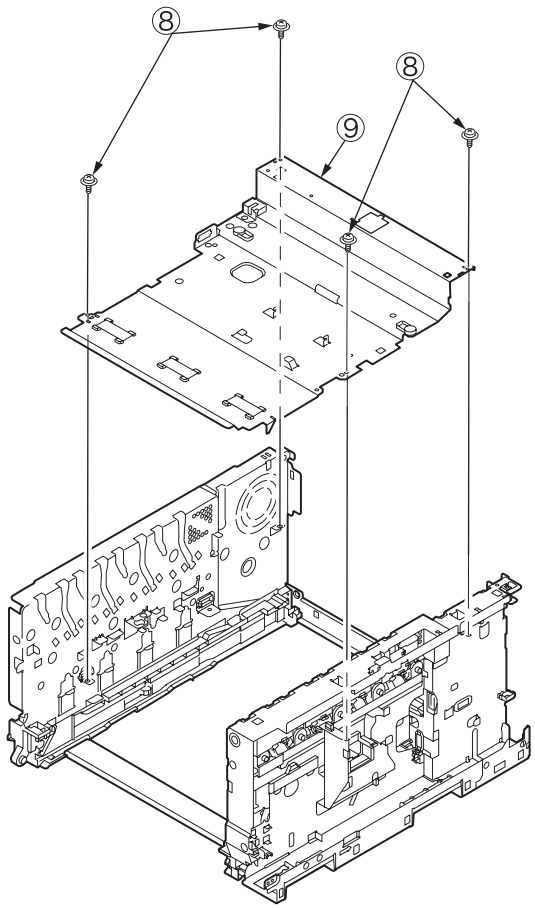
(4) Pull out the shaft ⑤ leftward.



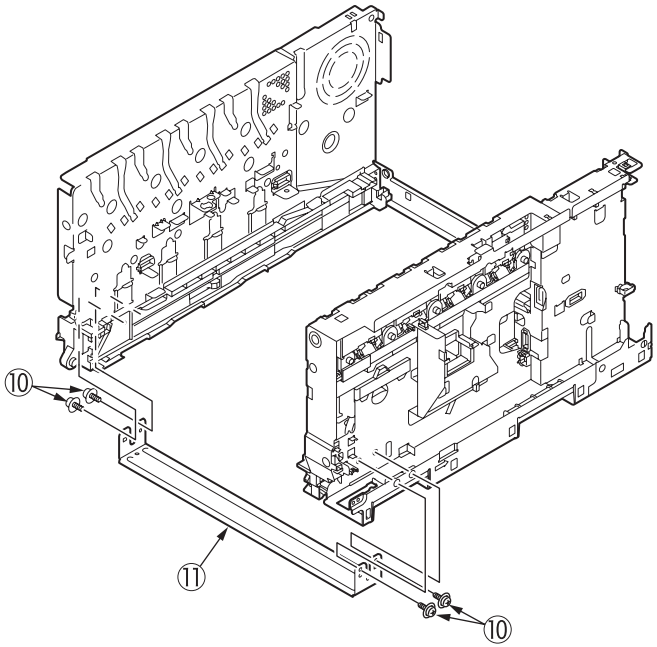
(5) Remove the screw (silver-colored) ⑥ to remove the belt bracket ⑦.



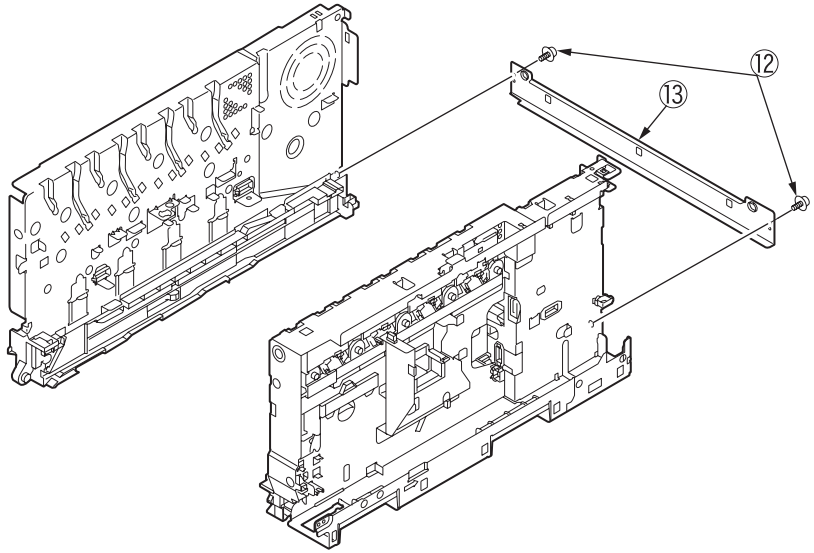
(6) Remove the four screws (silver-colored) ⑧ to remove the base plate ⑨.



(7) Remove the four screws (silver-colored) ⑩ to remove the plate beam ⑪.



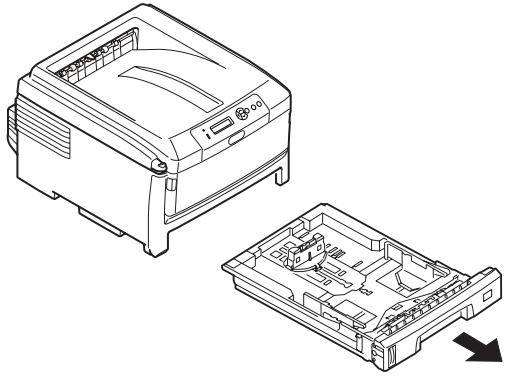
(8) Remove the two screws (silver-colored) ⑫ to remove the plate-beam-rear ⑬. The side L Assy. ⑭ and the side R Assy. ⑮ become detached.



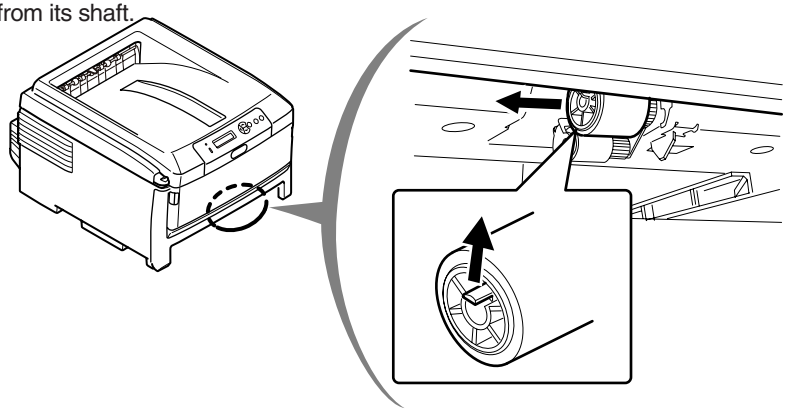
4.2.22 Paper feed roller (tray 1)

Note! When replacing the paper feed roller of the tray 1, be sure to replace the separator of the tray 1.

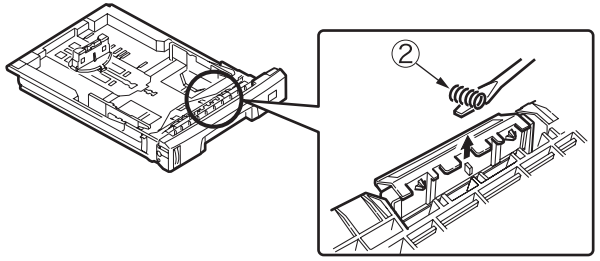
(1) Turn off the printer and remove the paper cassette of the tray 1.



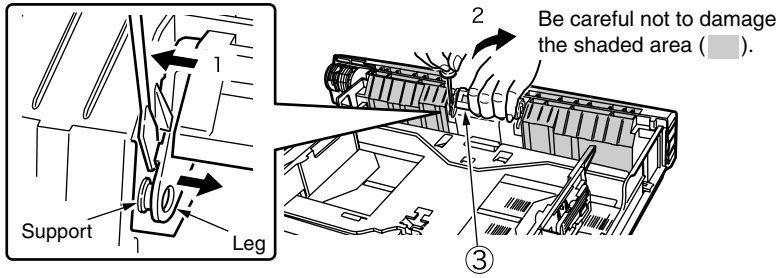
(2) Pressing the protrusion of the paper feed roller (large) ① outward, detach the roller from its shaft.



(3) Remove the spring ② from the paper cassette.

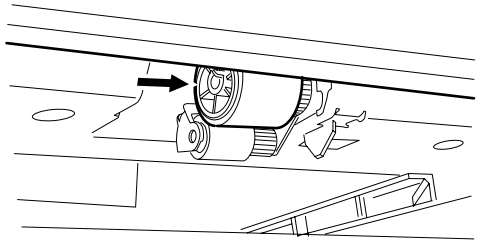


(4) Warping the separator until its one leg is removed out of the support of the leg ③, detach the separator.



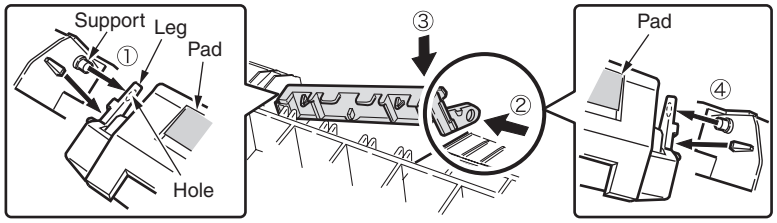
Notes on attaching paper feed roller:

1. To attach a new paper feed roller, insert it onto the shaft and turn it all the way. After attaching the roller, make sure it is not removed out of the shaft.



Notes on attaching separator

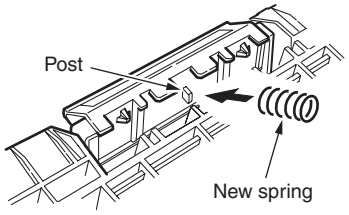
1. Insert the hole of one leg of a new separator onto the support of the leg and, bending the other leg, push the separator from above so as to insert the other support into the hole of the other leg. Be careful not to touch the pad (rubber) during this operation.



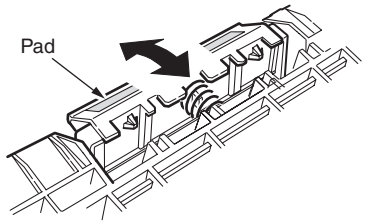
2. Make sure the supports are put in the holes of the legs.

3. Insert a new spring onto the post of the separator to attach it.

Note! • Be careful not to allow the spring to jump.
• The removed spring can be used.



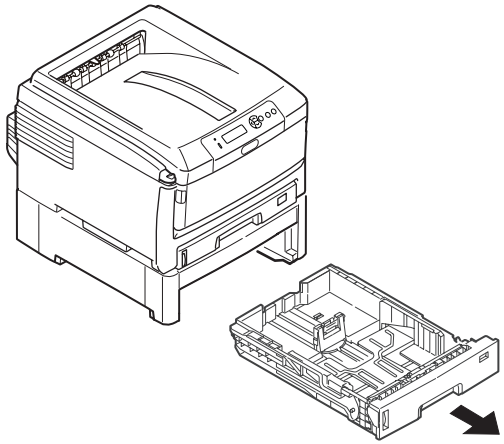
4. Be sure the separator turns smoothly around the supports. Be careful not to touch the pad (rubber) during this operation.



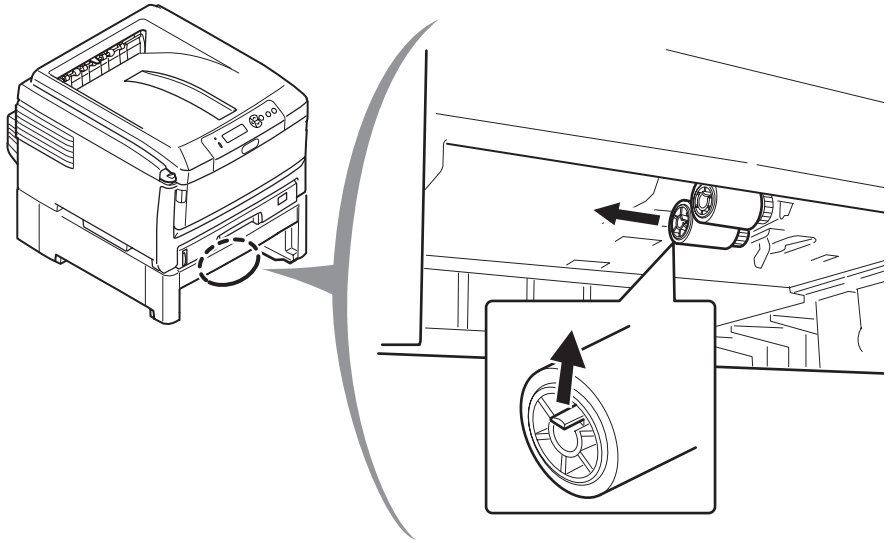
4.2.23 Paper feed rollers (tray 2/3 (option))

Note! Be sure to replace all of the three paper feed rollers.

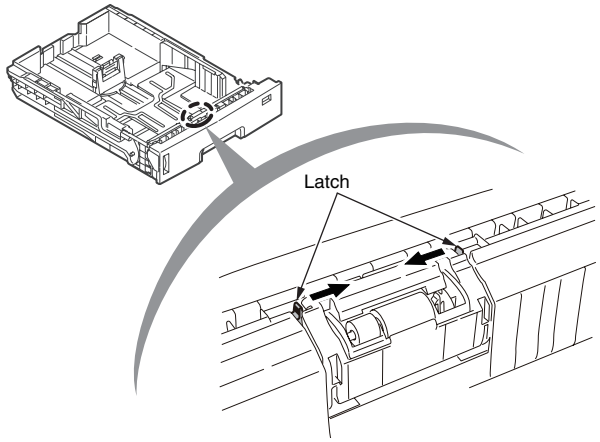
(1) Turn off the printer and remove the paper cassette of the tray 2/3.

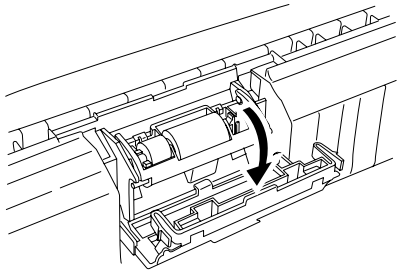


(2) Pressing the protrusions of the two paper feed rollers outward, detach them from their shafts.

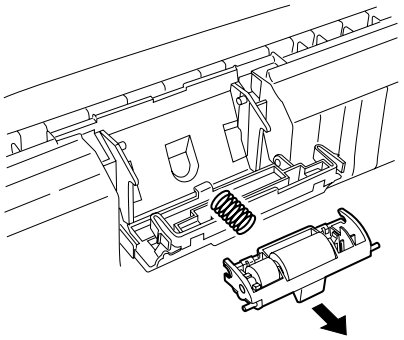


(3) Warp the protrusion on each side of the cover on the paper cassette to unlatch the cover and, turning the cover toward the front of the printer, remove the cover.



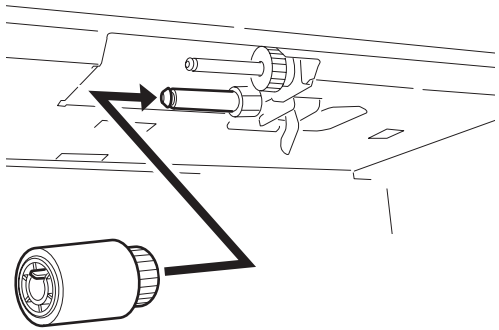


(4) Pull the retard roller Assy. in the direction of the arrow out of its shaft.

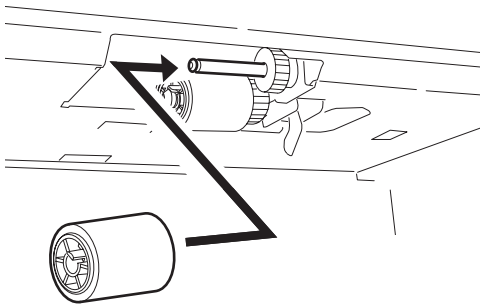


Notes on attaching paper feed rollers

1. Insert a new paper feed roller (with a gear) onto the inside shaft and turn it all the way in place.

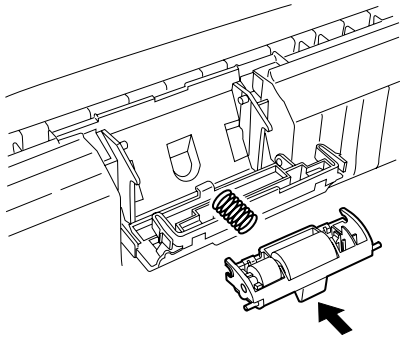


2. Insert a new paper feed roller (with no gears) onto the outside shaft and turn all the way in place. Be sure the rollers are not removed.

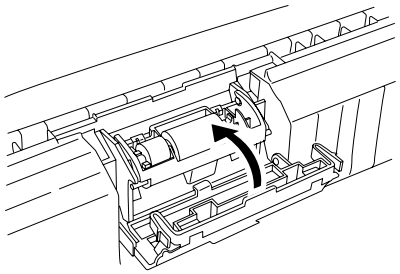


Notes on attaching retard roller Assy.

1. Put the spring onto the boss on the rear of a retard roller Assy., and push the bearing of the Assy. obliquely from below onto the shaft on the side of the cassette.

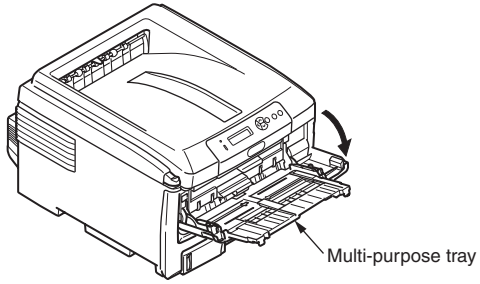


2. Be sure that the retard roller Assy. moves smoothly around the shaft and the roller turns.

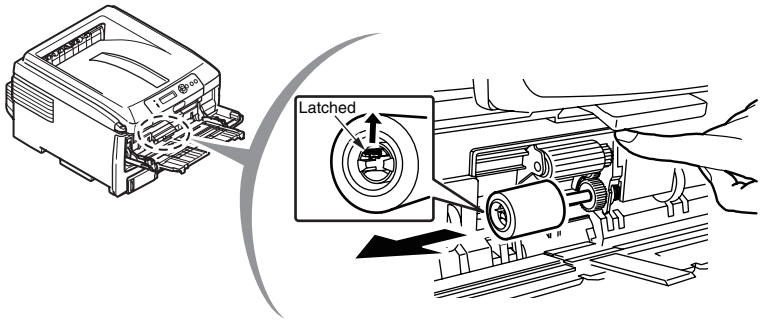


4.2.24 Paper feed roller (multi-purpose tray)

(1) Turn off the printer and open the multi-purpose tray.

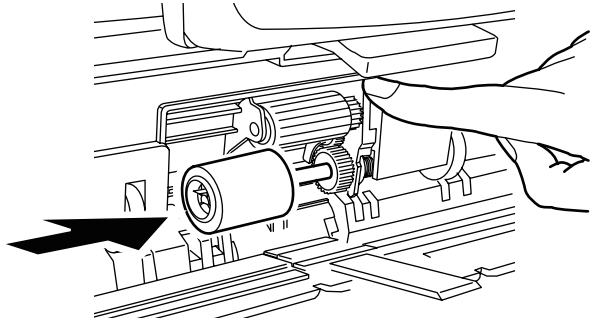


(2) Lift the paper pick-up section and, pressing the protrusion of the paper feed roller of the multi-purpose tray outward, remove the from its shaft.



Notes on attaching paper feed roller:

1. To attach a new paper feed roller, insert it onto the shaft and turn it all the way. After attaching the roller, make sure it is not removed out of the shaft.



4.3 Portions Lubricated

Portions lubricated are shown in this section.

The other portions must not be lubricated. Lubrication is not required during assembly or disassembly, except that the lubricant specified must be applied to portions from which lubricant was wiped.

Lubrication

(1) Lubricant names and their abbreviations

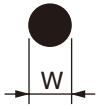
EM-30L : Molykote EM-30L

HP-300 : Molykote HP-300

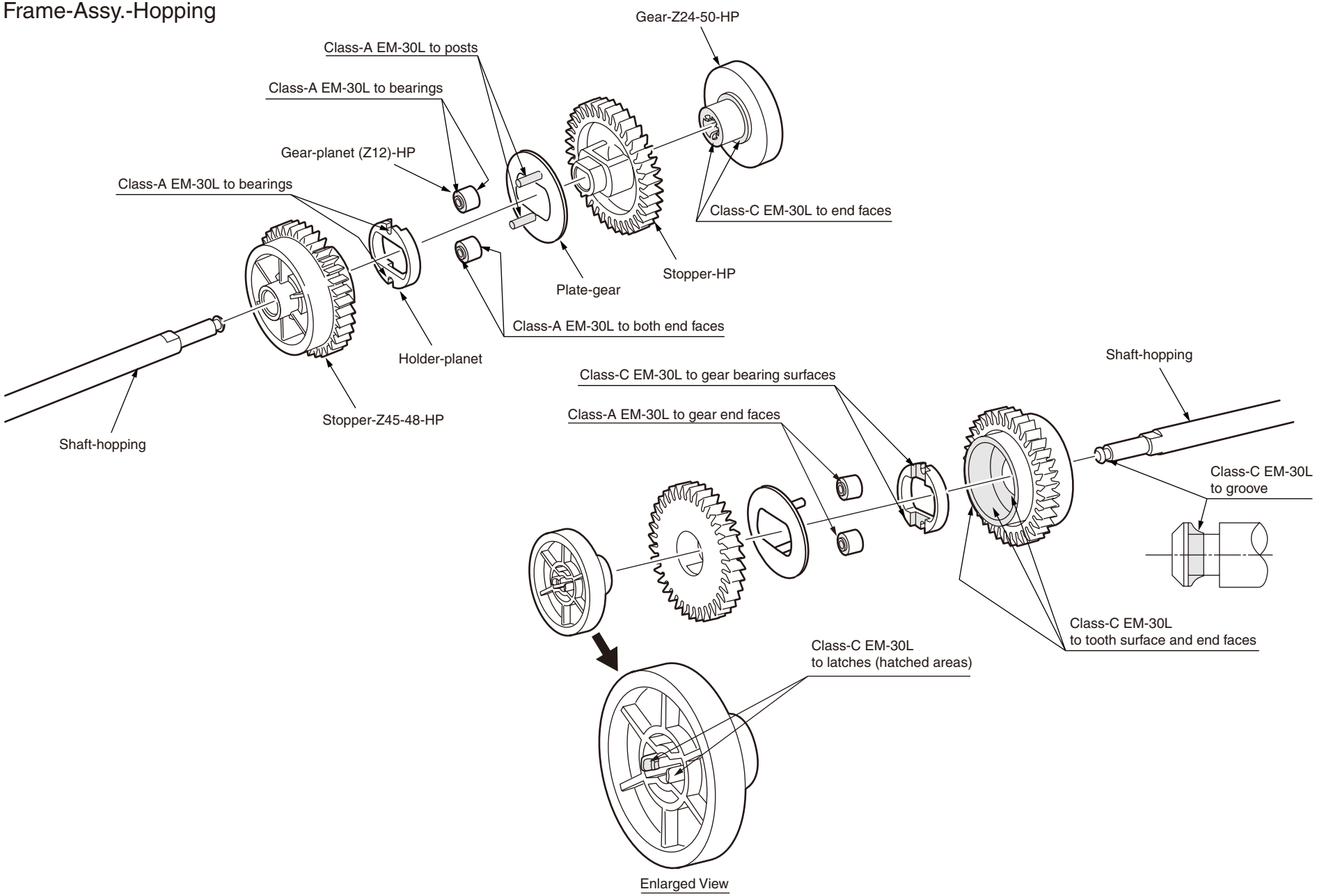
PM : Pan motor oil 10W-40 or ZOA 10W-30

(2) Grease boundary samples

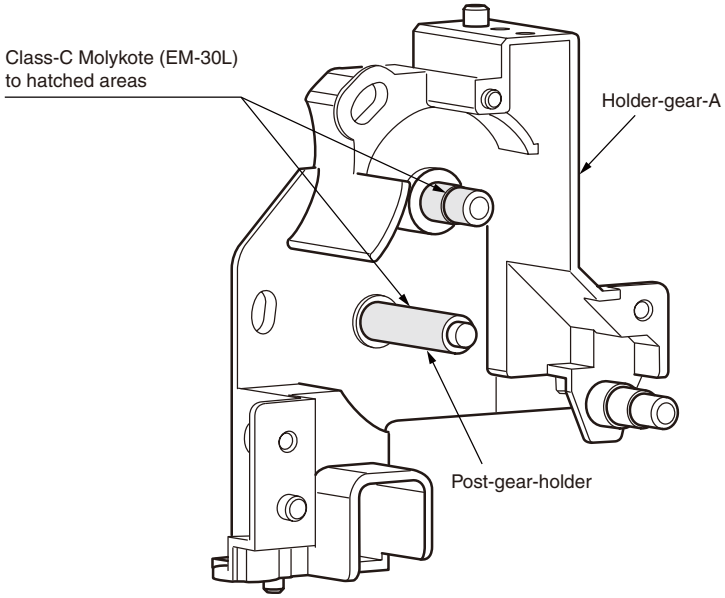
Class	S	A	B	C	D	E	F
Amount Applied (cc)	0.0005	0.003	0.005	0.01	0.03	0.05	0.1
Width (mm)	1.24	2.25	2.67	3.37	4.86	5.76	7.26
Sample	•	●	●	●	●	●	●

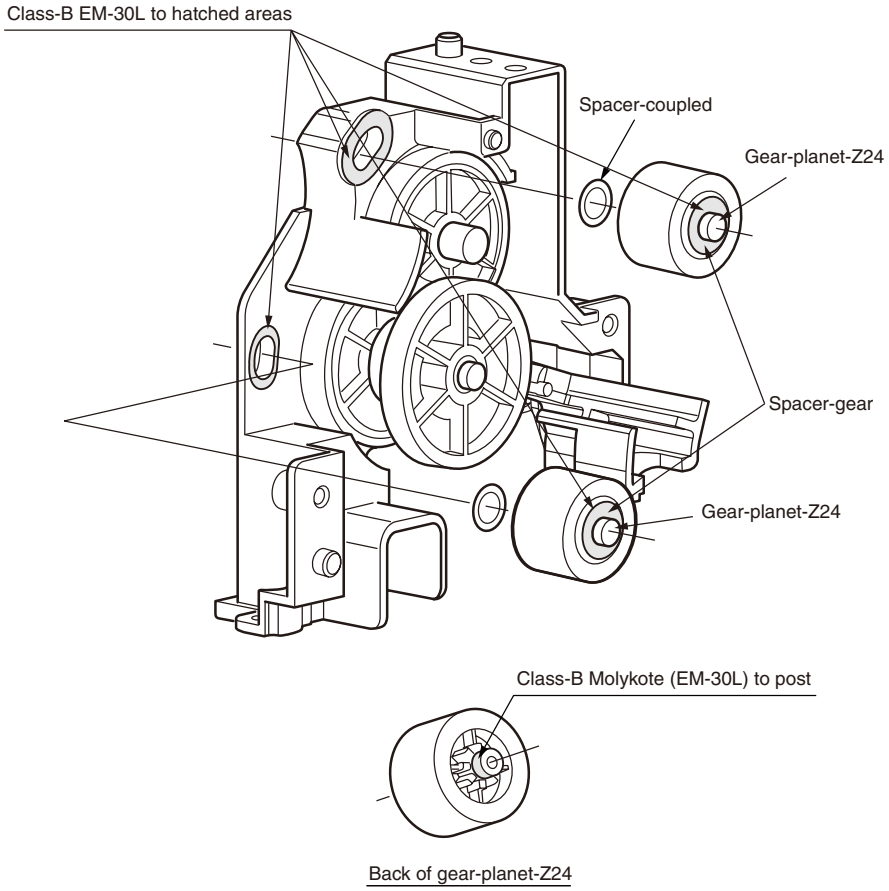


① Frame-Assy.-Hopping

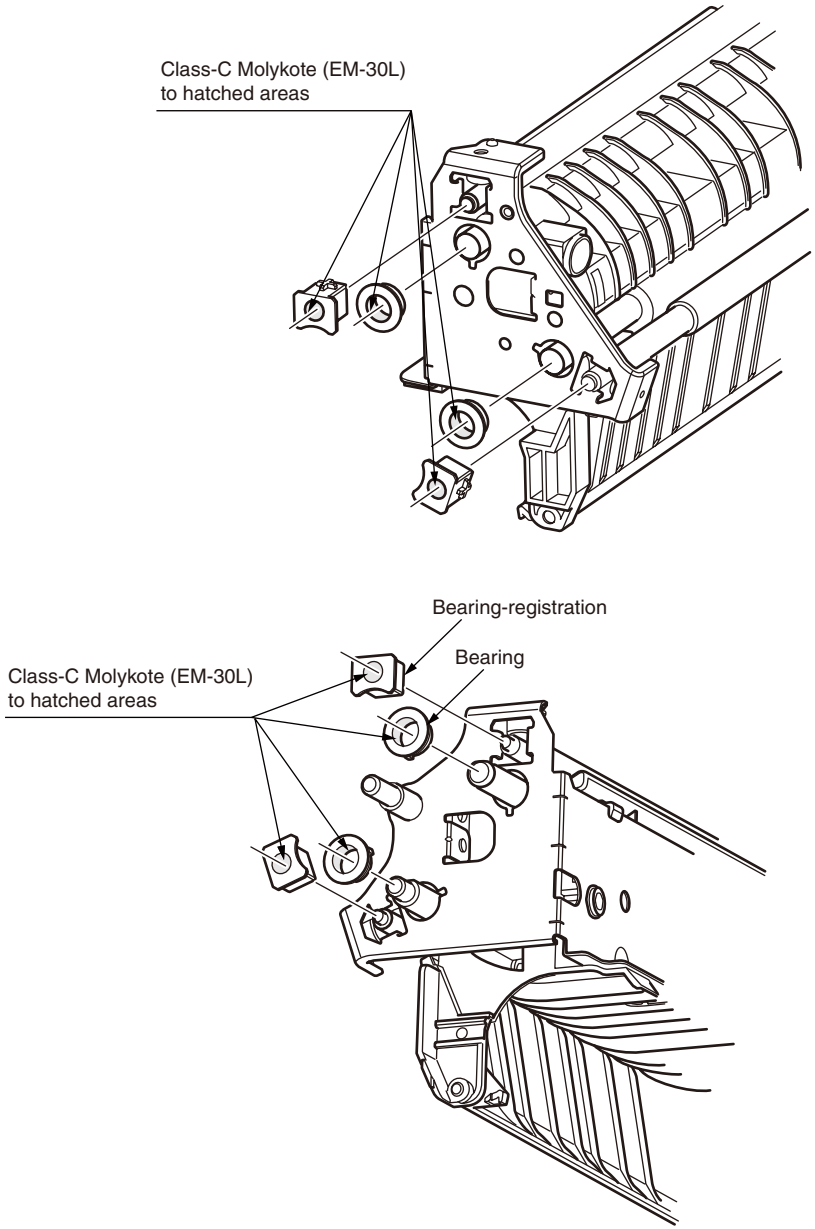


② Gear-Holder-Assy.

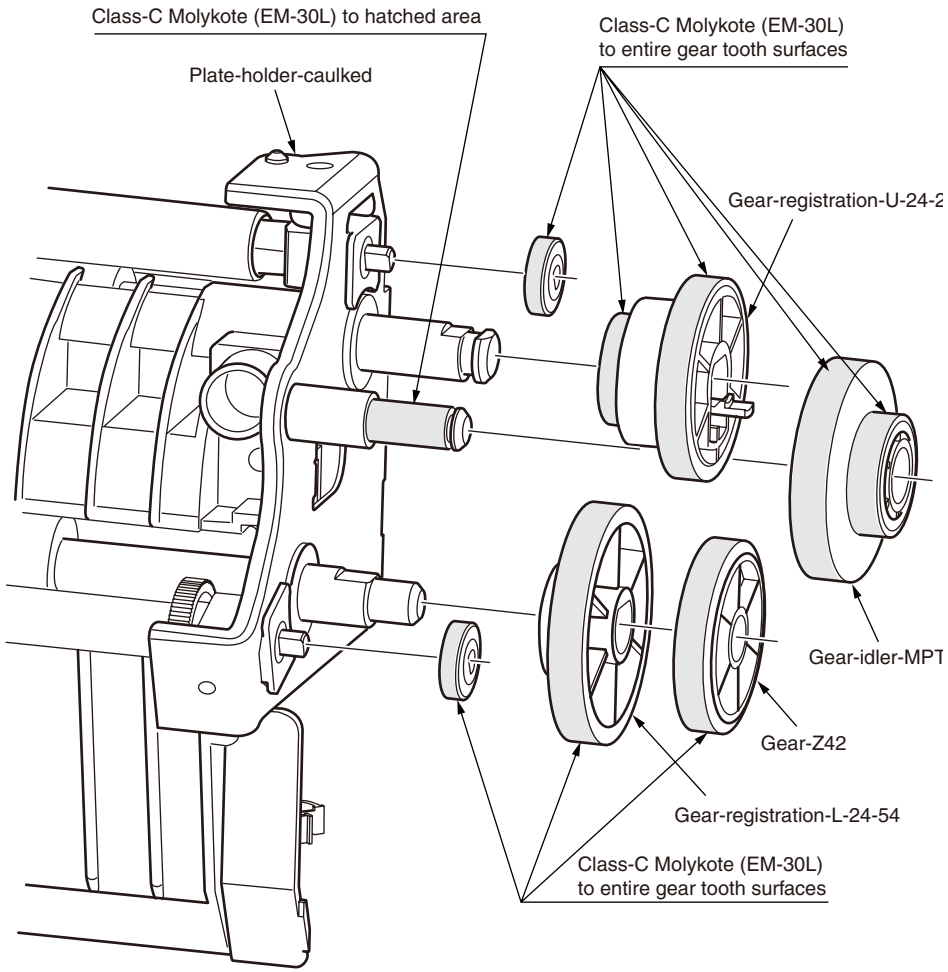




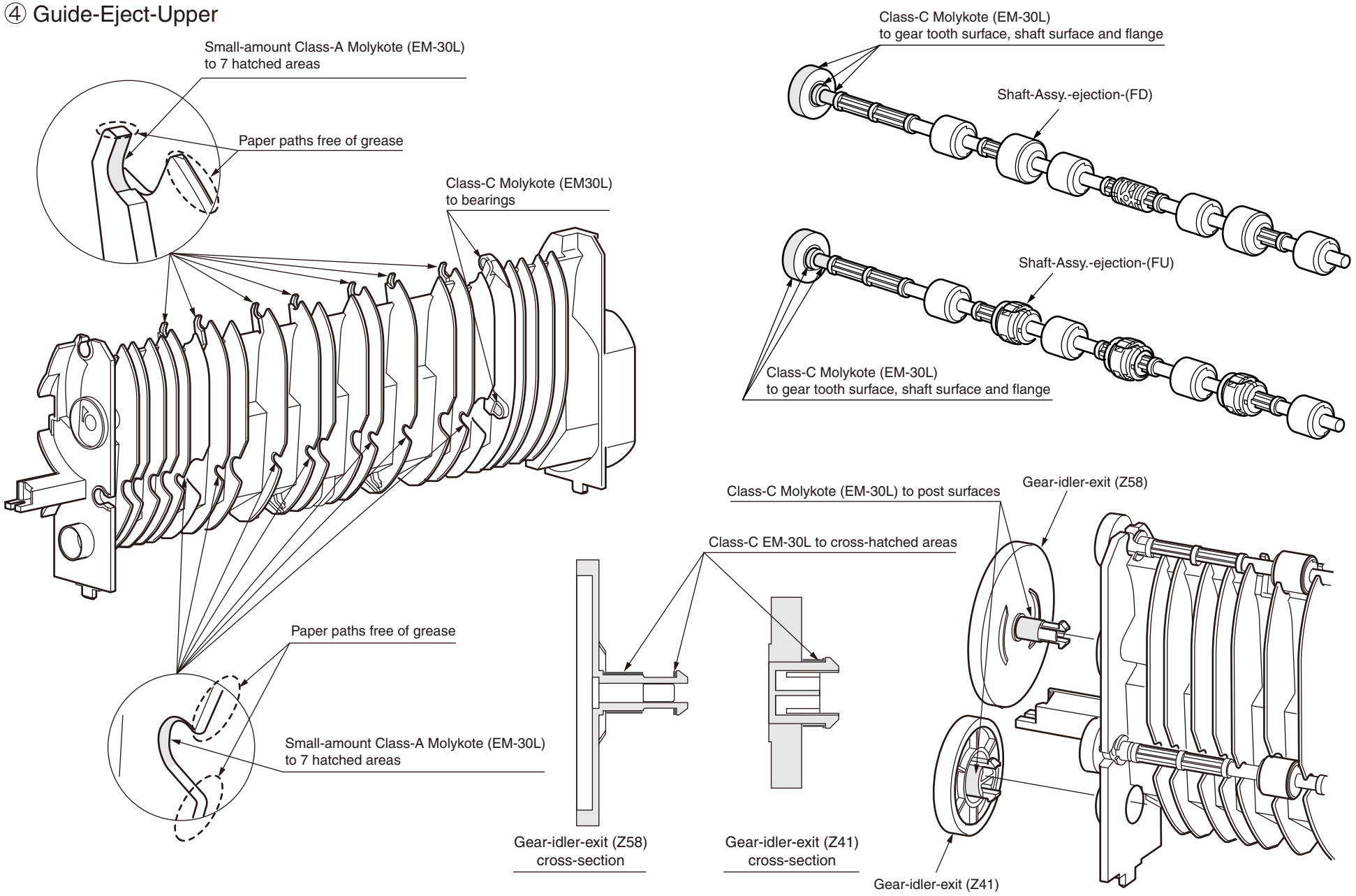
③ -1 Roller-Assy.-Regist(Lower)



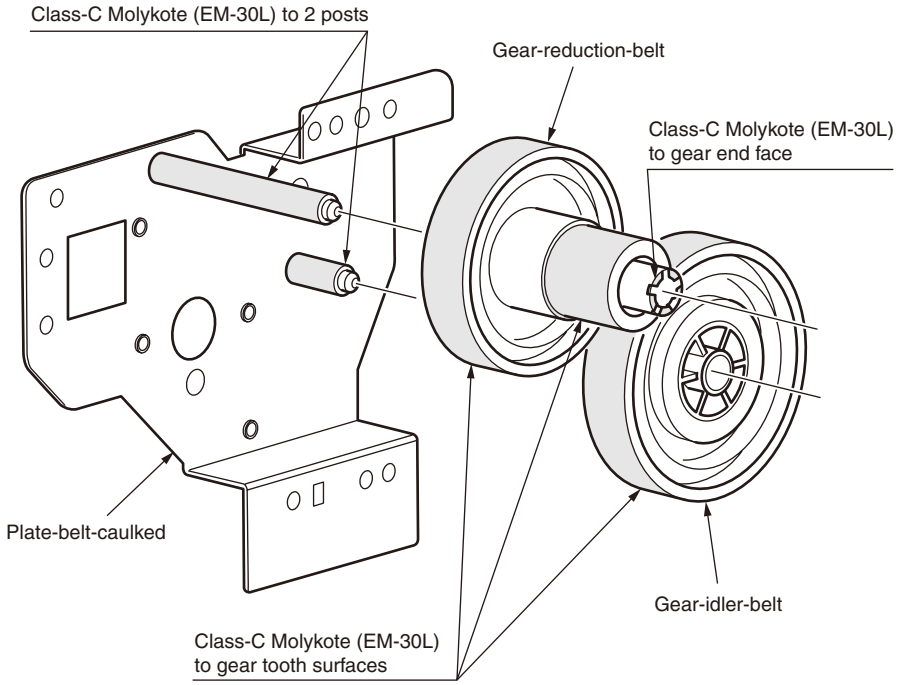
③ -2 Roller-Assy.-Regist(Lower)



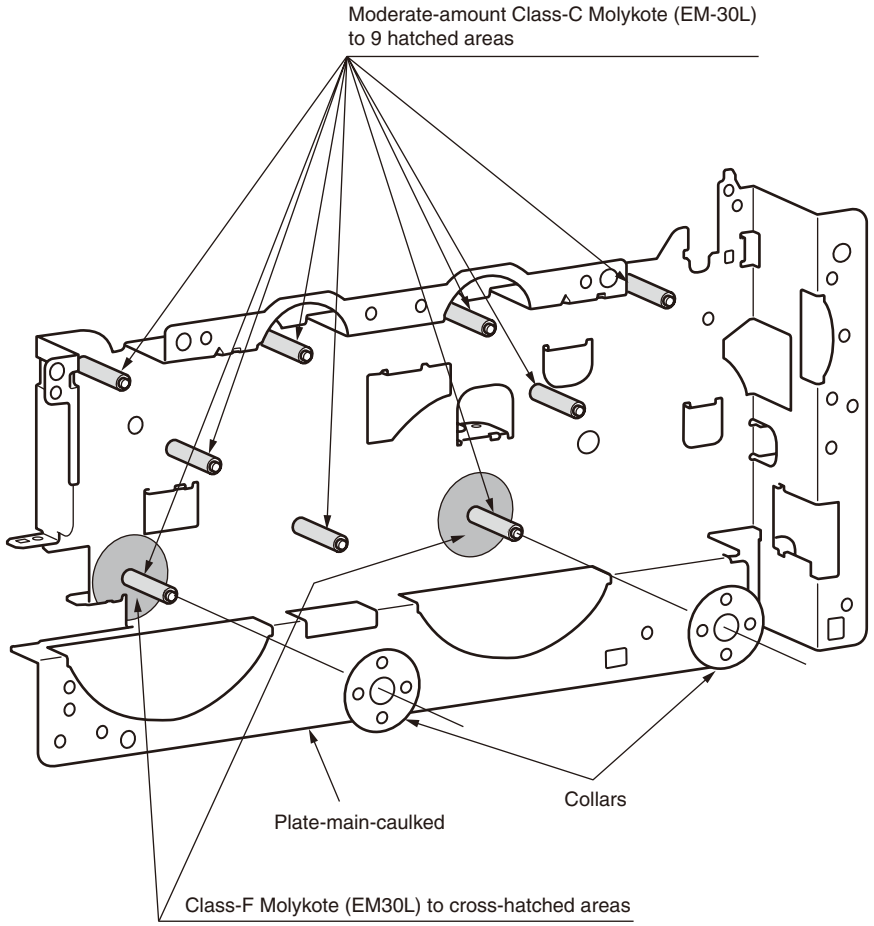
④ Guide-Eject-Upper



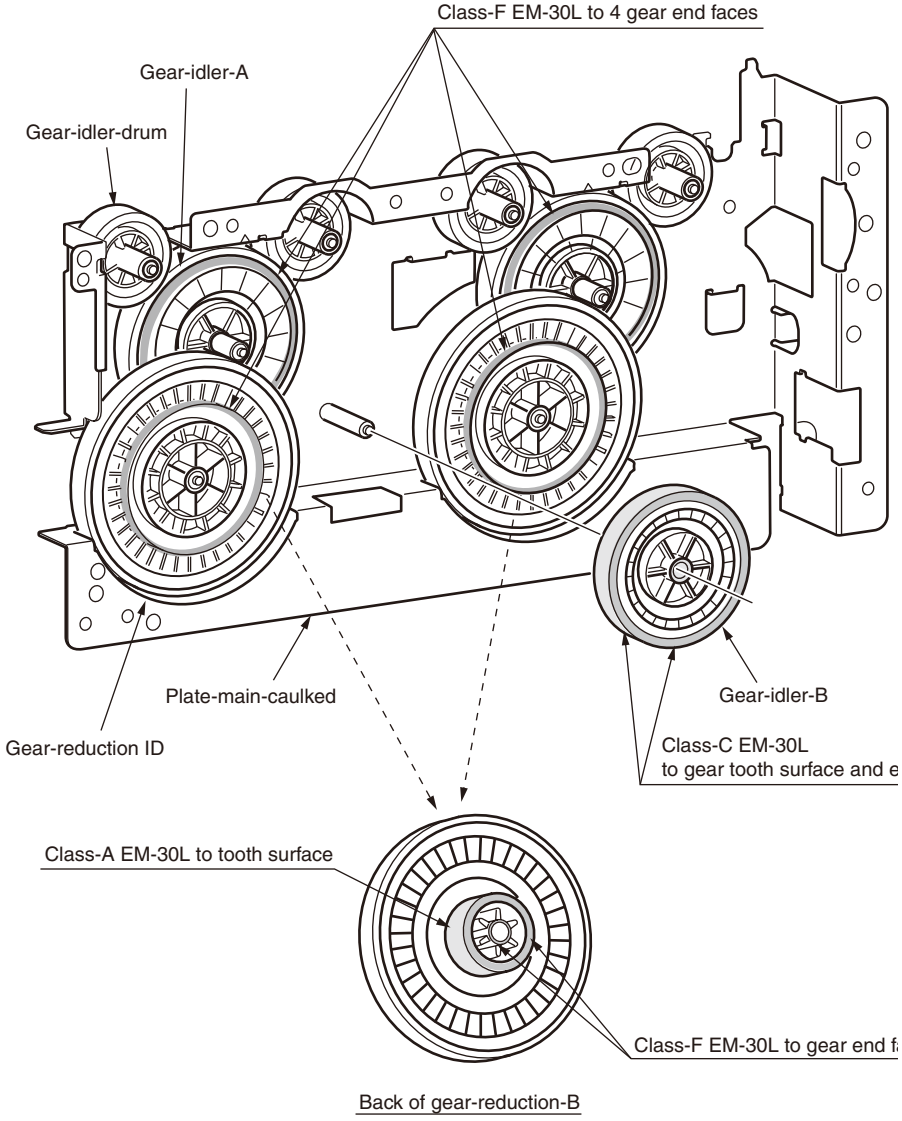
⑤ Motor-Assy.-Belt

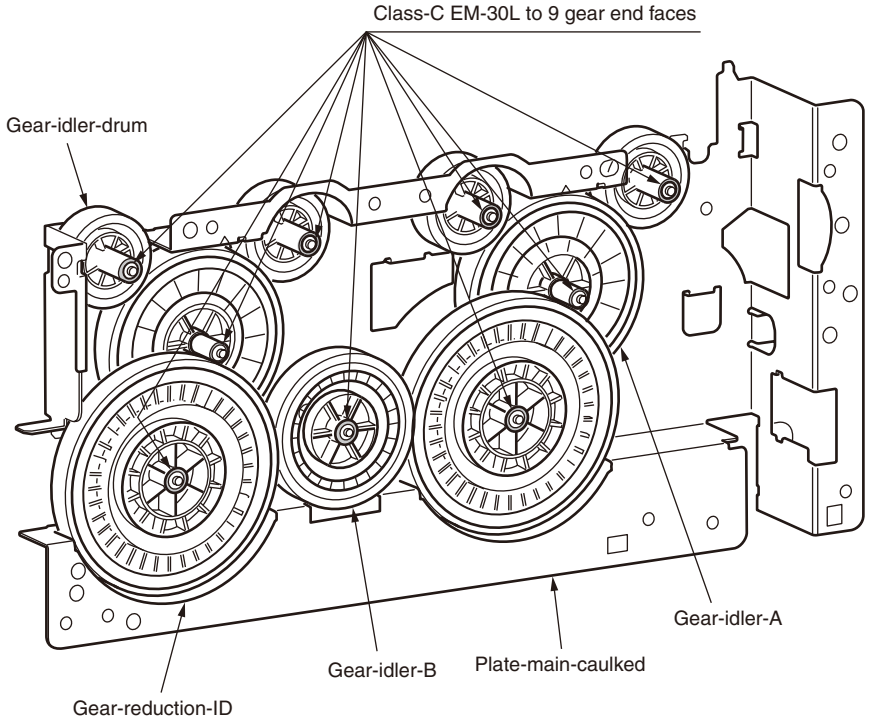


⑥ -1 Plate-Main-Assy.

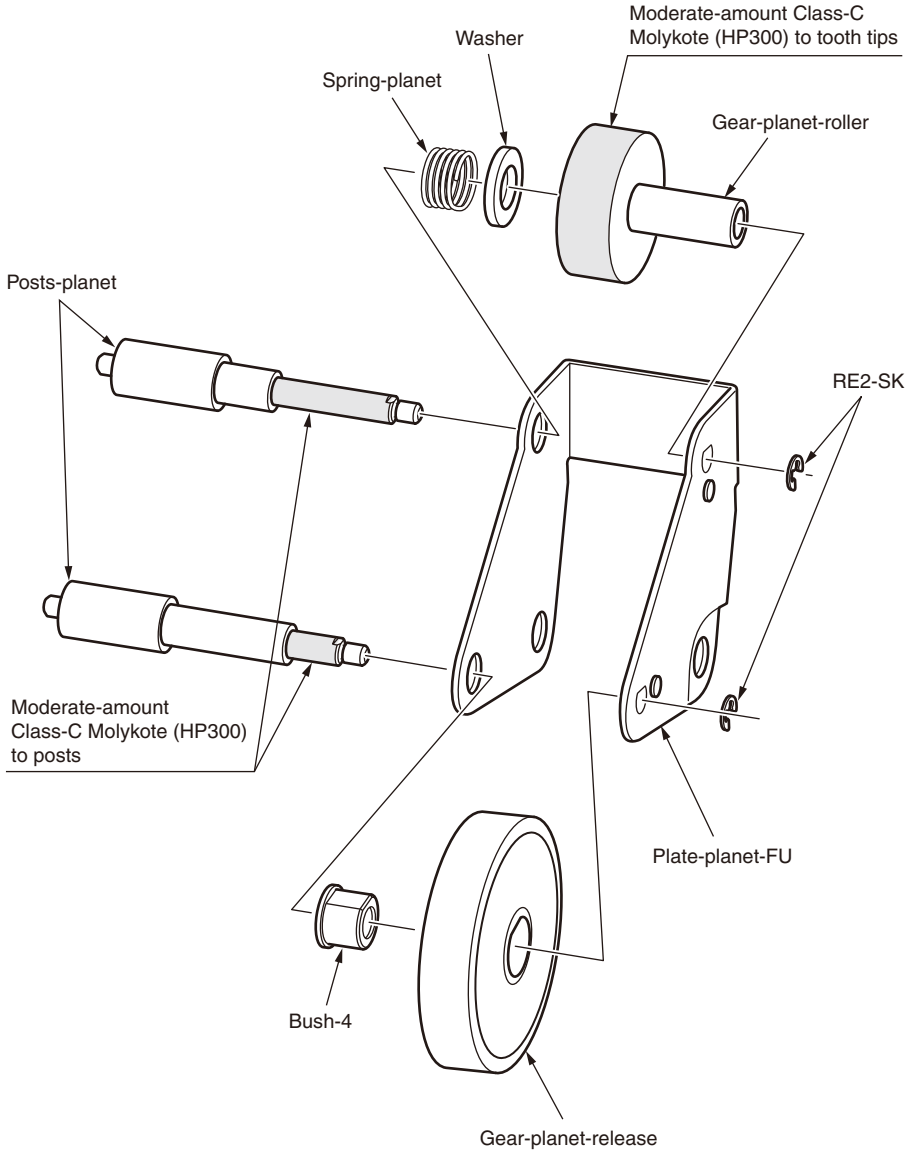

Moderate-amount Class-C Molykote (EM-30L) to 9 hatched areas
Collars
Plate-main-caulked
Class-F Molykote (EM30L) to cross-hatched areas

⑥ -2 Plate-Main-Assy.

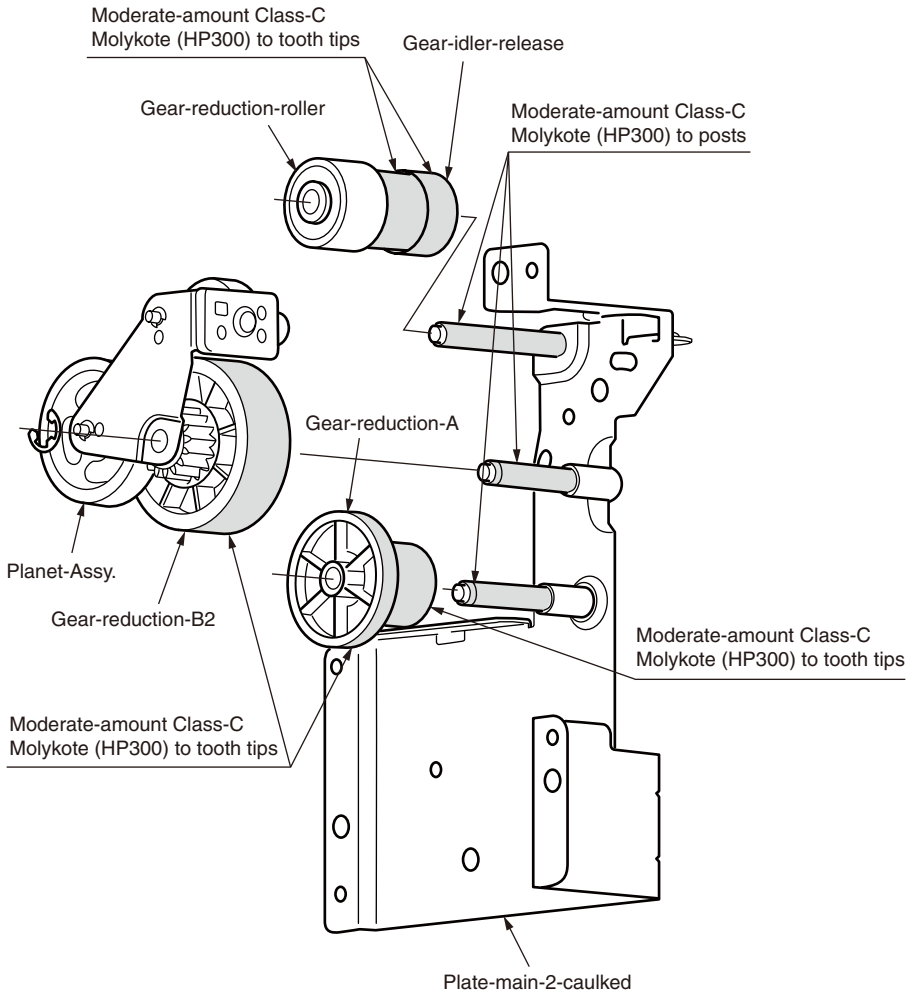




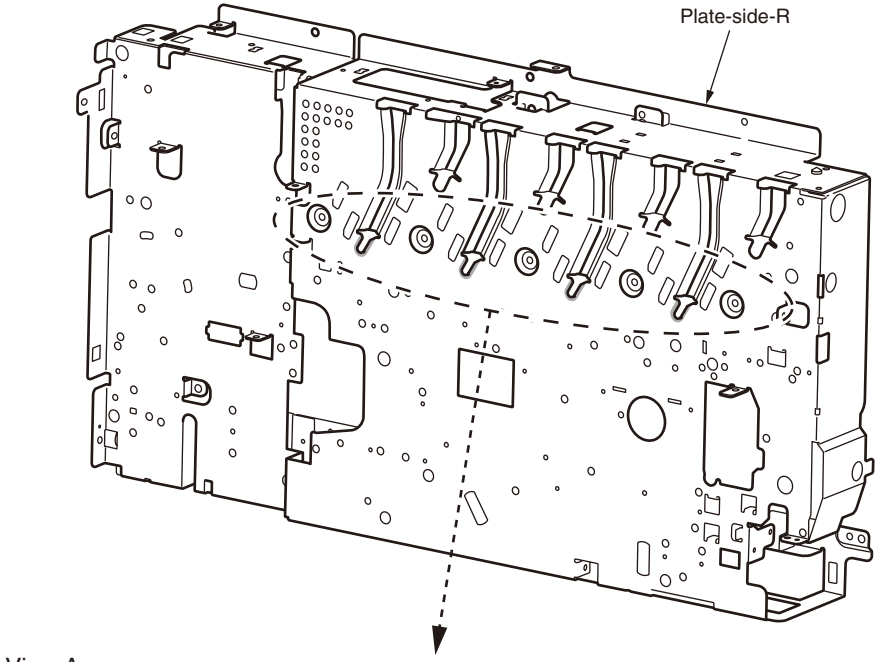
⑦ Planet-Assy.



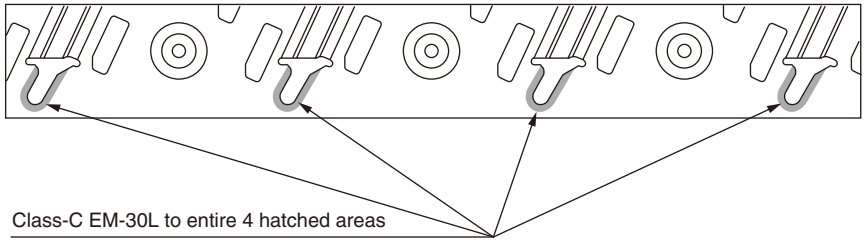
⑧ Plate-Main2-Assy.



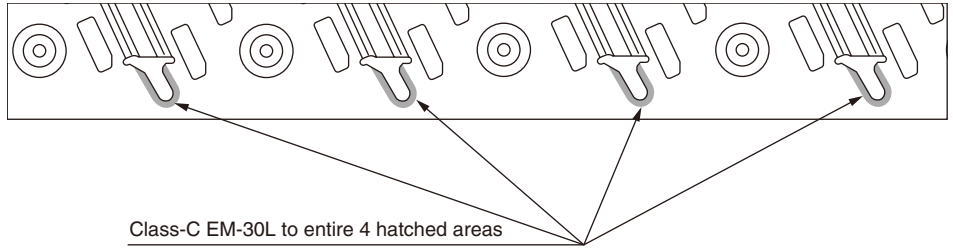
⑨ -1 Plate-Side-R-Assy.



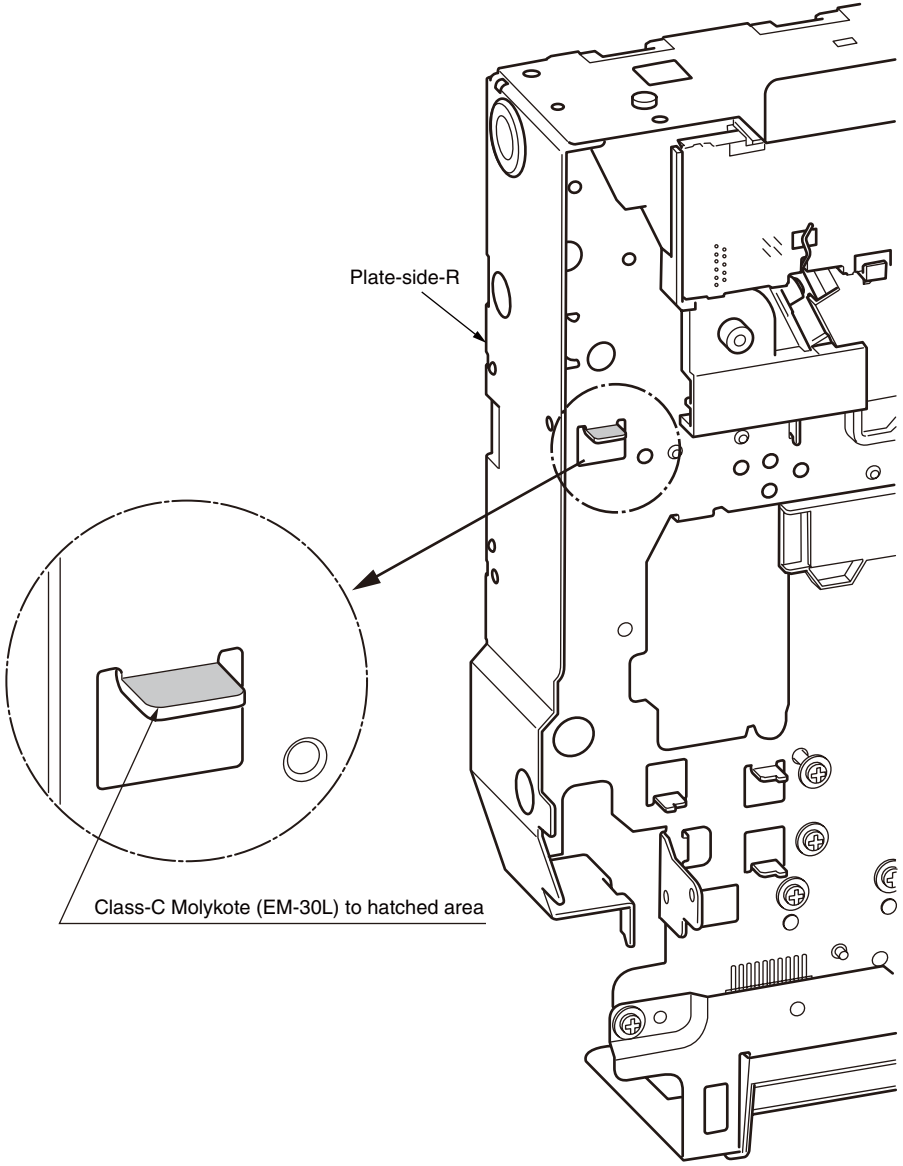
View A



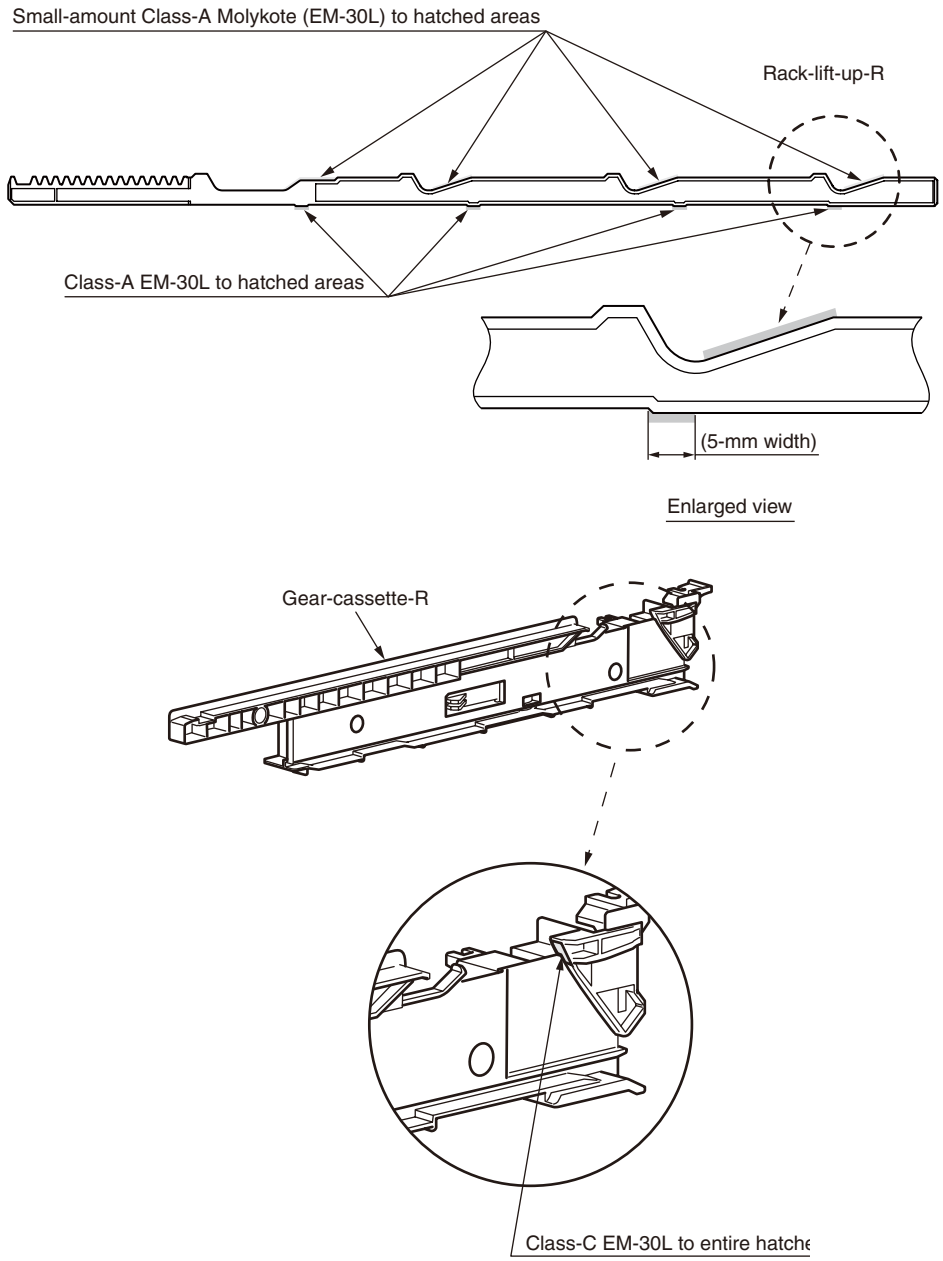
Back of A-View



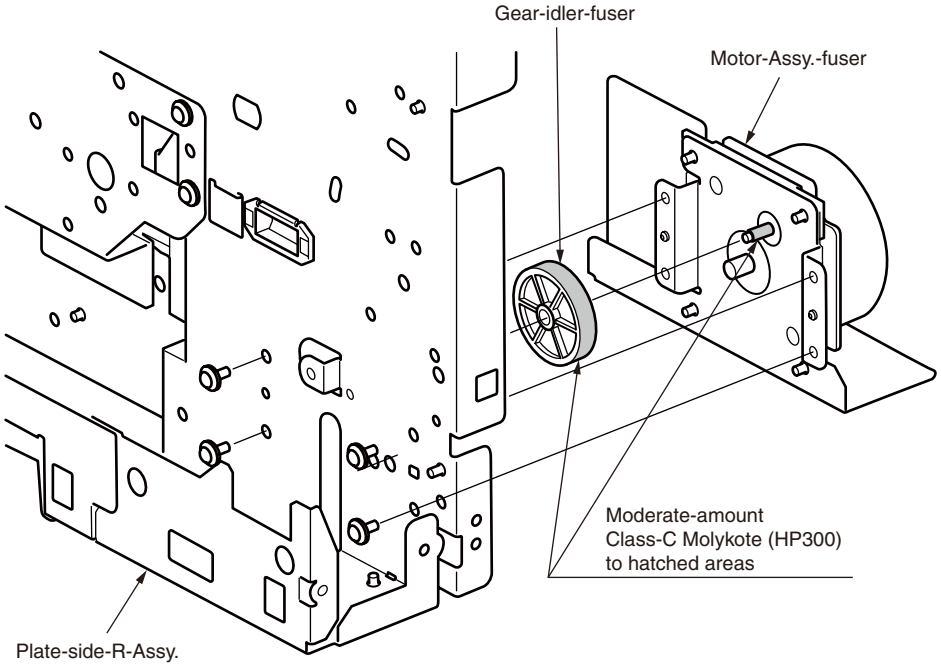
⑨ -2 Plate-Side-R-Assy



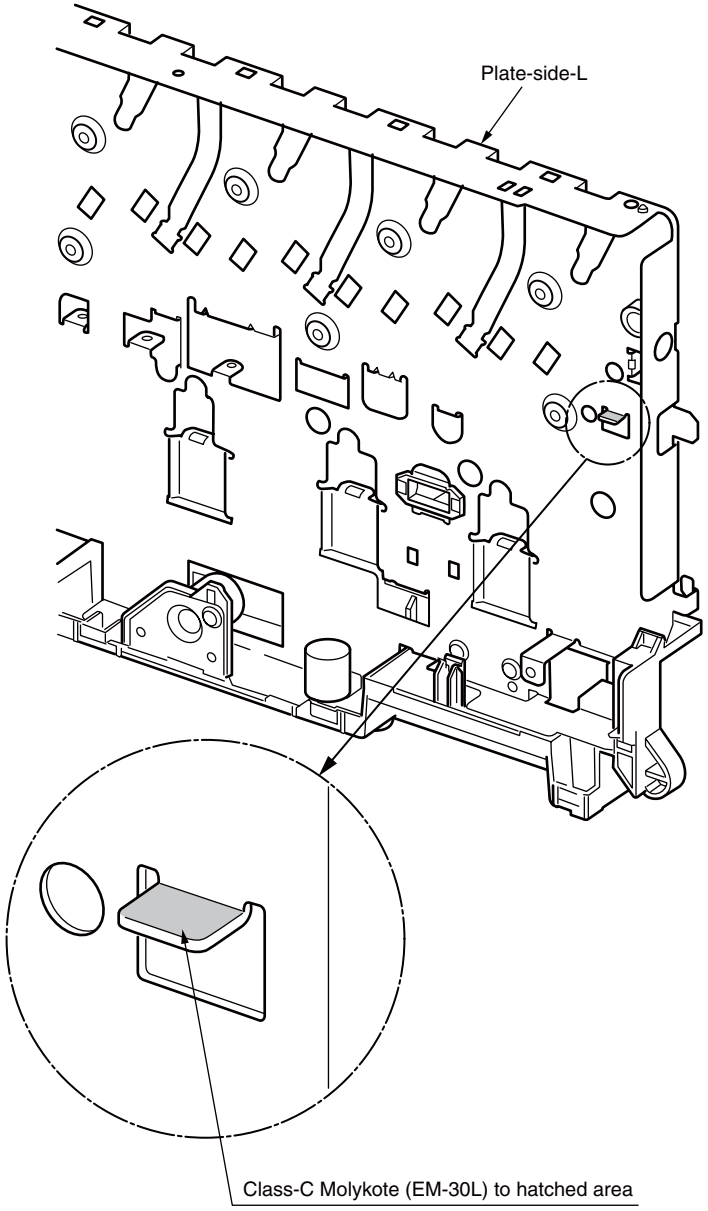
⑨ -3 Plate-Side-R-Assy



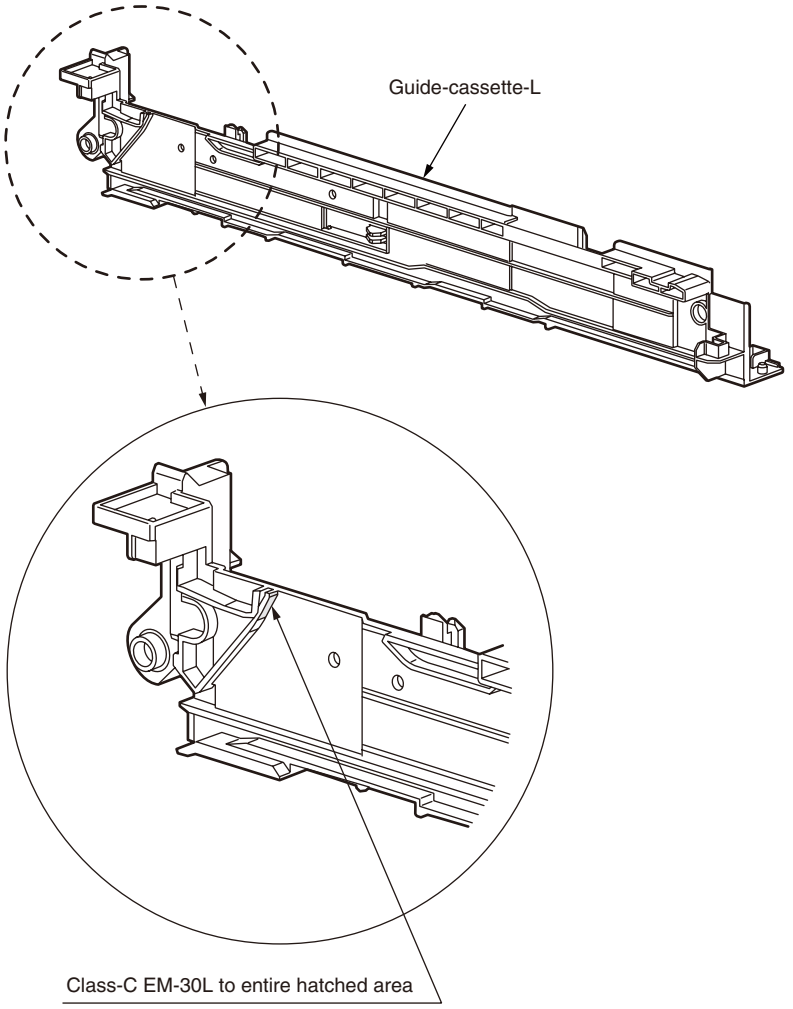
⑨ -4 Plate-Side-R-Assy



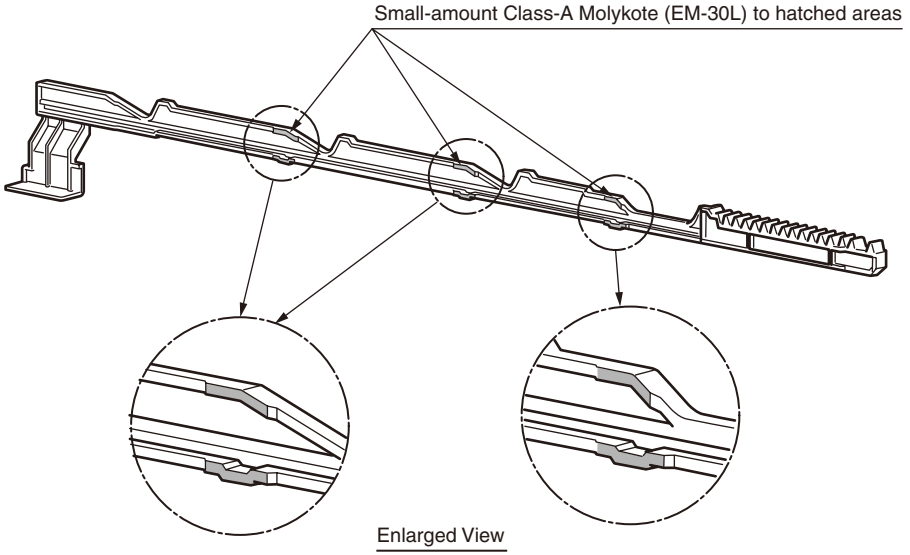
⑩ -1 Plate-Side-L-Assy.

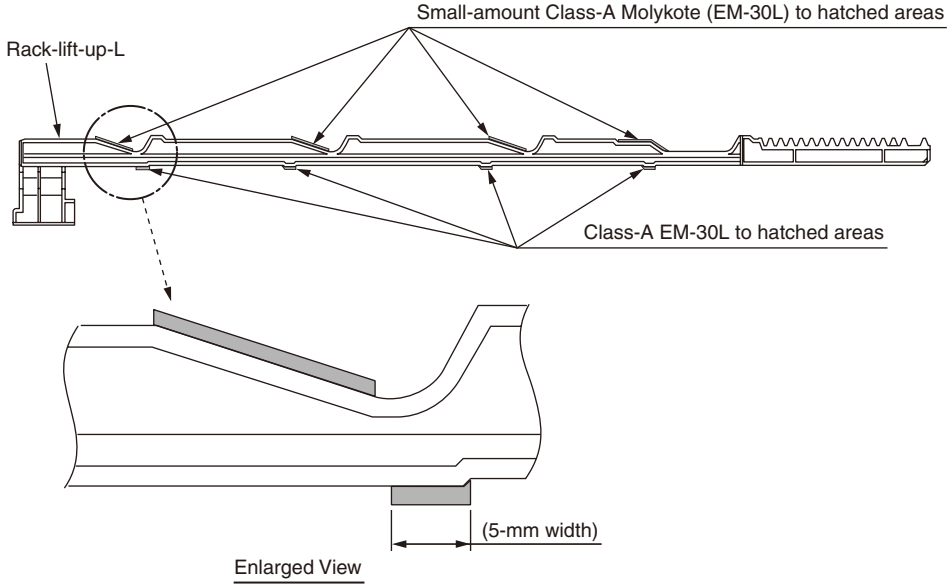


⑩ -2 Plate-Side-L-Assy.

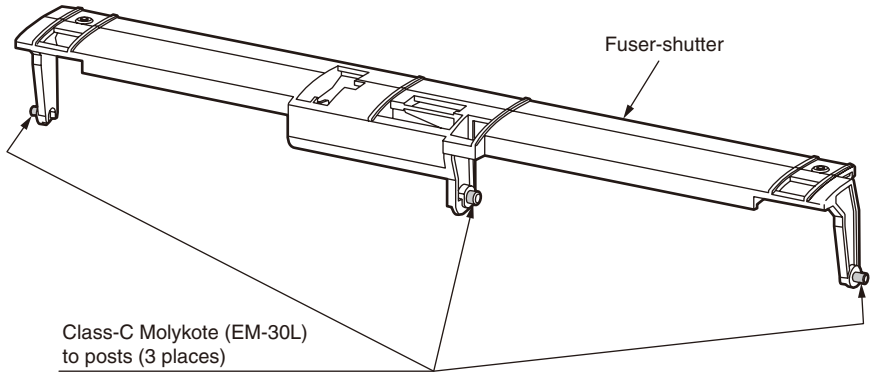


⑩ -3 Plate-Side-L-Assy

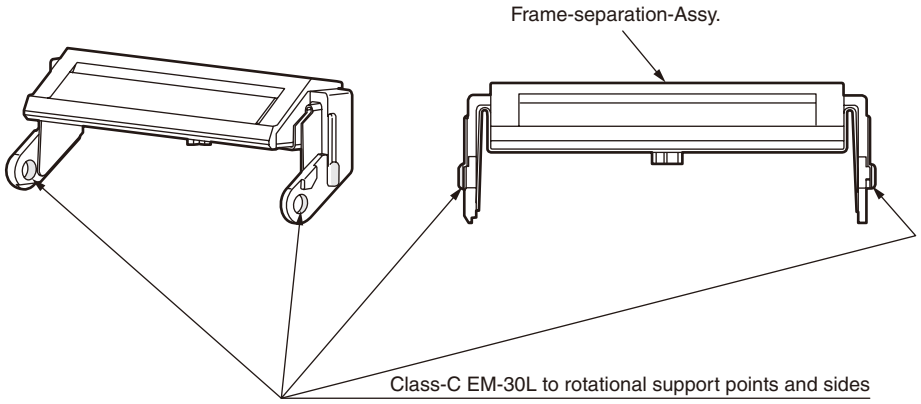




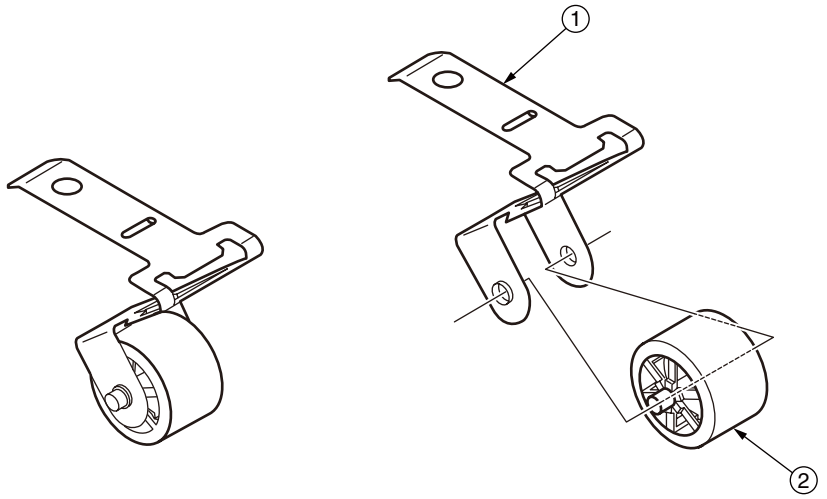
⑪ Sensor-Regist-Assy.

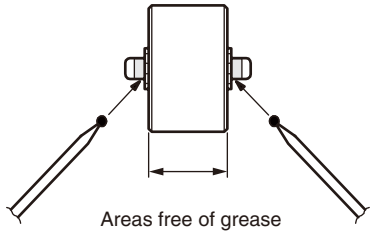


⑫ Cassette-Assy.



⑬ Roller-Assy.-Idle(FD)

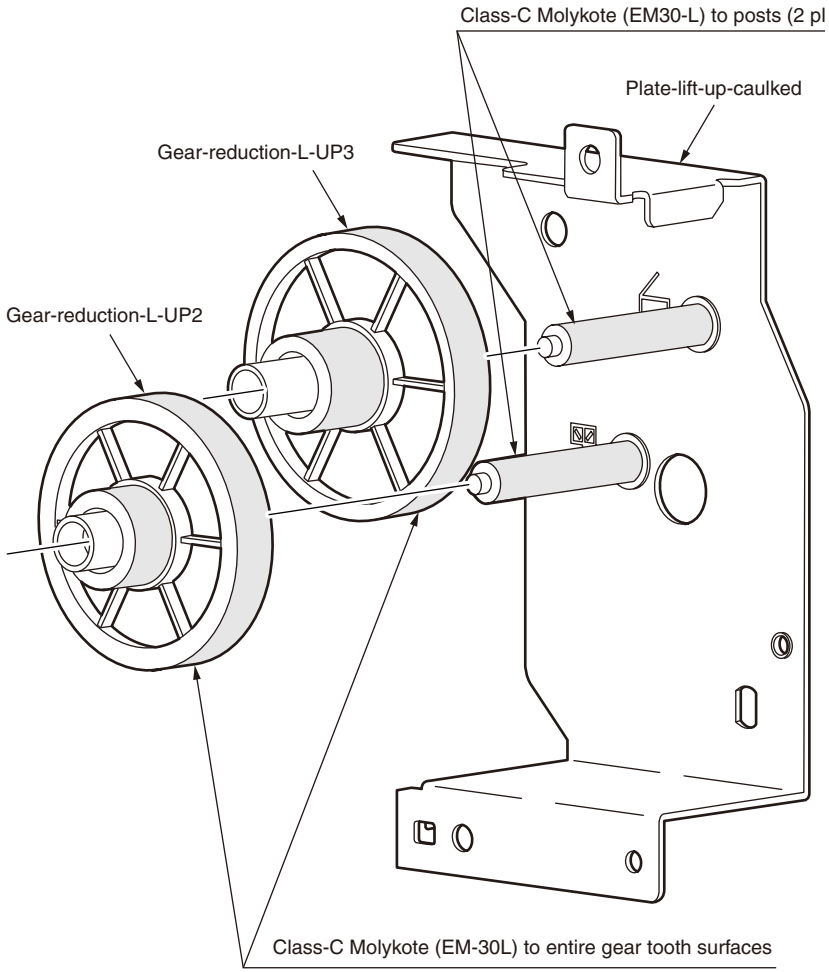


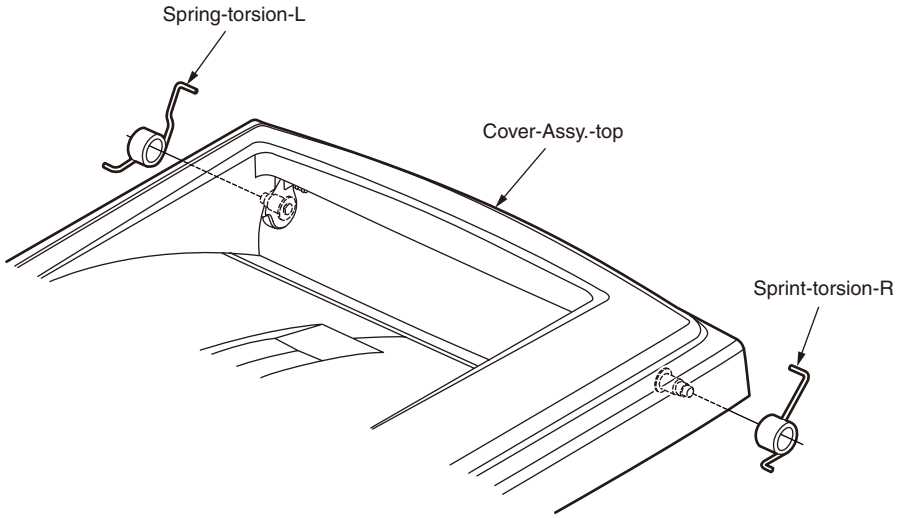


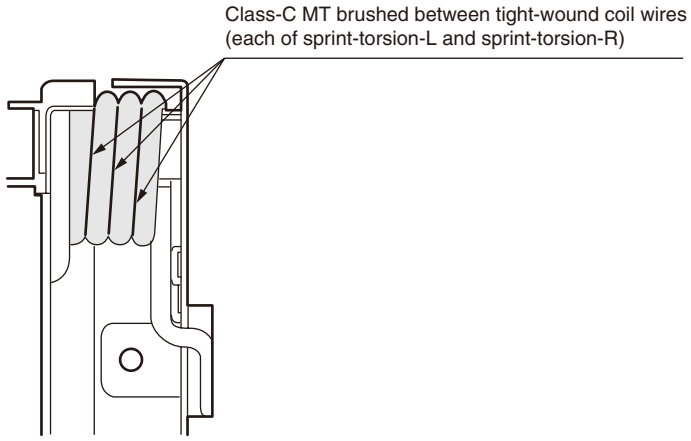
Grease Application:

Apply a very small amount (Class S) of Molykote (EM-30L) to the sliding areas of ① and ② (hatched areas) before assembling them.

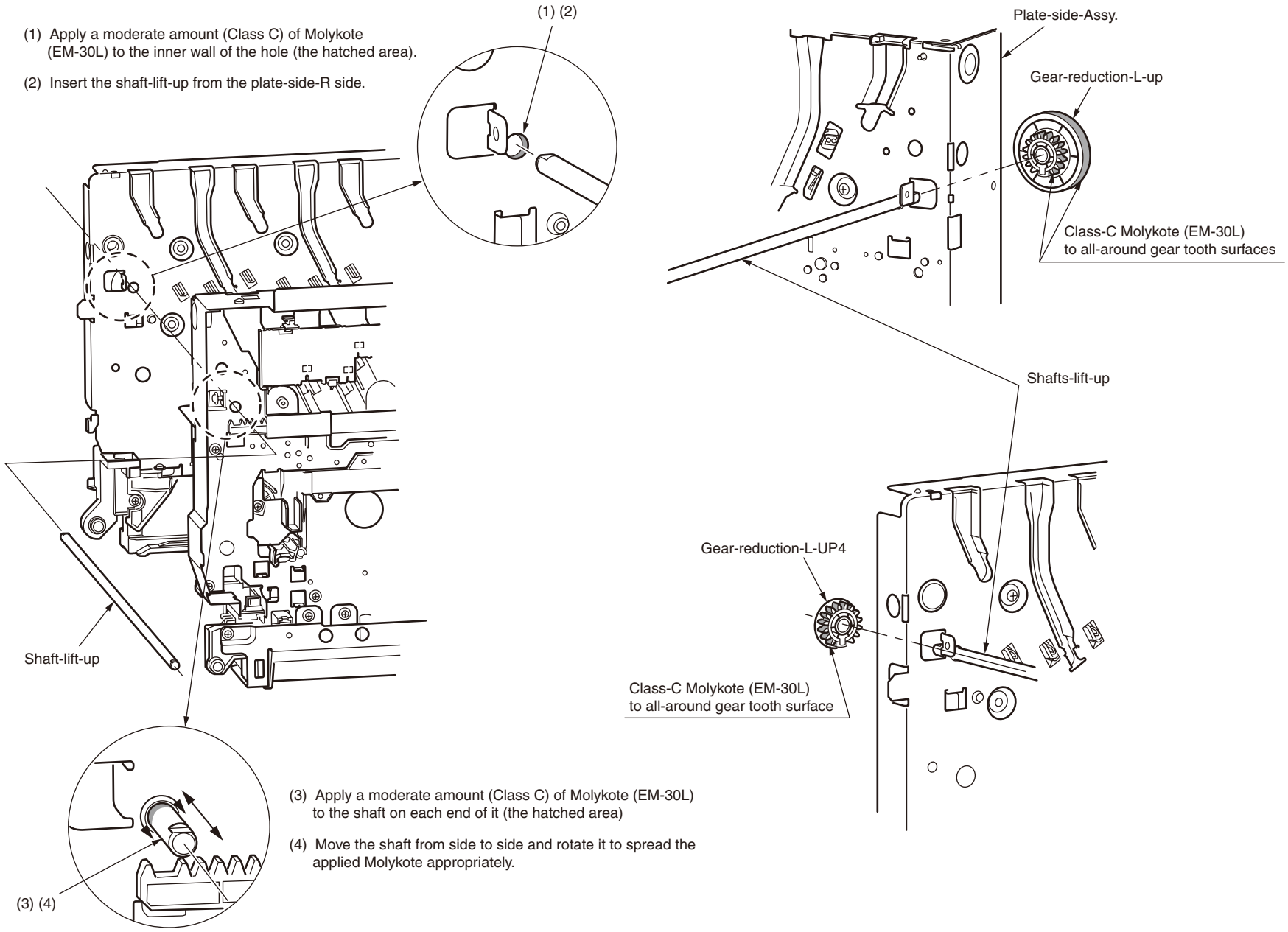
⑭ -1 Printer-Unit (PX736)



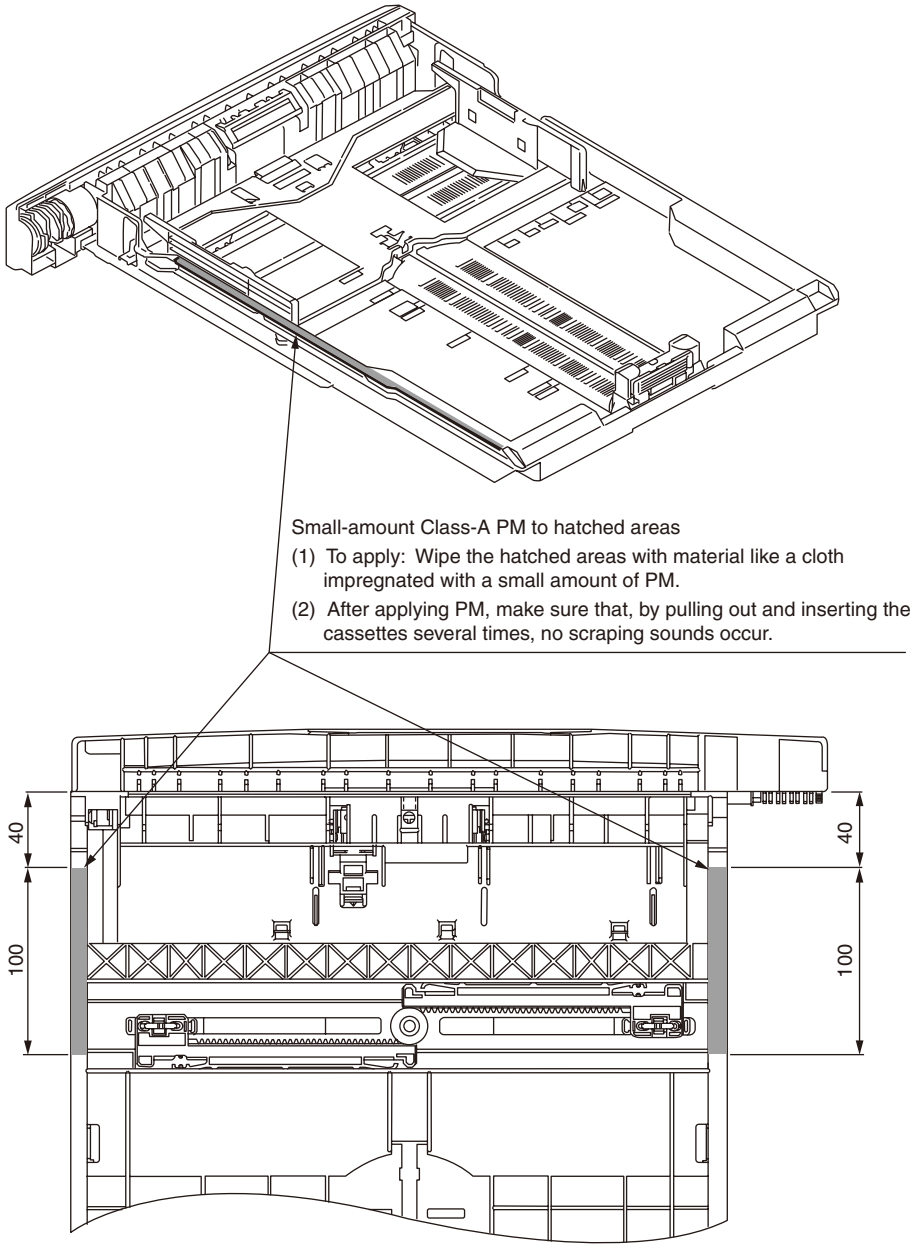




⑭ -2 Printer-Unit (PX736)


(1) Apply a moderate amount (Class C) of Molykote (EM-30L) to the inner wall of the hole (the hatched area).
(2) Insert the shaft-lift-up from the plate-side-R side.
(1) (2)
Plate-side-Assy.
Gear-reduction-L-up
Class-C Molykote (EM-30L) to all-around gear tooth surfaces
Shafts-lift-up
Gear-reduction-L-UP4
Class-C Molykote (EM-30L) to all-around gear tooth surface
Shaft-lift-up
(3) Apply a moderate amount (Class C) of Molykote (EM-30L) to the shaft on each end of it (the hatched area)
(4) Move the shaft from side to side and rotate it to spread the applied Molykote appropriately.
(3) (4)

⑭ -3 Printer-Unit (PX736)


Small-amount Class-A PM to hatched areas
(1) To apply: Wipe the hatched areas with material like a cloth impregnated with a small amount of PM.
(2) After applying PM, make sure that, by pulling out and inserting the cassettes several times, no scraping sounds occur.
40
100
40
100

5. MAINTENANCE MENUS

The adjustment of this printer can be implemented using the maintenance utility and also by key input through the operator panel.
This printer provides maintenance menus, apart from the normal menus. Select the menu that best suits the purpose of your intended adjustment.

5.1 System maintenance menu (For maintenance personnel) 113
5.2 Maintenance utility..... 114
5.3 Functions of user's maintenance menu..... 117
5.4 Setup after replacement of parts..... 136
5.5 About the manual setup of Print density adjustment..... 139
5.6 Administrator Menu List of the Printer..... 140

5.1 System maintenance menu (For maintenance personnel)

This menu is activated when the power is turned with the MENU and MENU keys held down.

The menu indications are given in English only, irrespective of the destination of the printer.

Note! Since this menu is likely to be changed depending on the destination or for other reason, it is not disclosed to the end users.

Table 5-1 Maintenance menu indication table

Category	Item (1st Line)	Value (2nd Line)	DF	Functions
SYSTEM AMINTE	ENTER PASSWORD	******		Enters a password to enter the system maintenance menu. The number of digits for the password is 6 to 12 digits of figures and small-case alphabets. The default is "000000".
OKIUSER	OKIUSER	ODA OEL APS JP1 JPOEM1 OEMA OEML	*	Used to set the destination. JPOEM1: Japan OEM OEMA: Overseas OEM for A4 default OEML: Overseas OEM for Letter default. When the menu is dismissed, the printer is automatically rebooted.
MAINTE-NANCE MENU	FLASH FORMAT	EXECUTE	-	Initializes the Flash ROM. When this item is executed, the menu is dismissed, and formatting of the flash device mounted in the Resident (Onboard) begins. **CAUTION! NIC F/W will be erased**
	MENU RESET	EXECUTE	-	Resets the EEPROM contents to the factory defaults. After the settings have been changed, the printer is automatically rebooted. * Certain special items are not initialized.
	RESET PARAMETER	EXECUTE	-	Resets a content of EEPROM to thefactory default. In addition to it, resets settings that relate to OEM and can not be initialized by "MENU RESET". Reboots automatically after changing the setting. * Some settings of PU, Network, and so on are not initialized.
CONFIG MENU	CODESET	TYPE1 TYPE2	*J *E	This menu is displayed on the printers for all destinations. TYPE1: Russian/Greek/ Bulgarian is disabled. TYPE2: Russian/Greek/ Bulgarian is enabled. When the menu is dismissed, the printer is automatically rebooted. For destinations of OEL/APS/OEMA, TYPE2 is the default value, and for the rest of destinations, TYPE1 is the default value.
TEST PRINT MENU	TEST PRINT MENU	ENABLE DISABLE	*	Setting is made here to select either to display or not to display "ENG STATUS IPRINT" under "USER MENU" - "PRINT INFORMATION" category. If this item is set to "DISABLE", "ENG STATUS PRINT" will not be displayed at all. When the menu is dismissed after changing the setting, the printer is restarted.
FUSE-KEEP MODE	FUSE KEEP MODE	EXECUTE	-	Pressing the ENTER key issues a command from CU to PU, making the printer ONLINE. A consumable part is replaced with a new one with the power switched on and the operation is checked (in this condition, the new consumable fuse is not cut, and the operation count is not added to the value of the old consumable part). Turning off the power terminates the check mode, and the mode becomes invalid next time the power is turned on.
ENGINE DIAG MODE			-	Activates the self-diagnostic mode of the engine.

Operations of the switches and LCD indications produced during the self-diagnostic mode are different from the specifications for operation of the printer.

See 5.3.2 Self-diagnostic mode.

5.2 Maintenance utility

The maintenance utility is used to perform the adjustments of Table 5-2.
Details of the maintenance utility are described below.

(1) Maintenance Utility Operation Manual:
42678801FU01 Rev.10 or later (Japanese)
42678801FU02 Rev.10 or later (English)

(2) The maintenance utility programs are indicated below.

Applicable Operating System	File Name	Part Number
Win9xMe (Japanese/English version)	MuWin.zip	42678801FW01 Rev21 or later

Table 5-2 Maintenance Utility Adjustment Items

	Item	Adjustment	Section No. of the maintenance Utility Operation	Operation on Operator Panel (Section No. corresponds to the Mainte-nance manual)
1	PU Board Replace-ment	Copying of the EEPROM of PU PCB. Adjustment purpose: The above data is copied to another PU PCB in the event that the current PU PCB needs to be replaced due to maintenance replacement.	Subsect. 2.4.1.1.1	Invalid operation
2	PU Serial Number Setting	Reprogramming printer serial number recorded on PU Adjustment Purpose: Set for a board replaced for maintenance when it is impossible to copy EEPROM of the PU board (I/F error etc.)	Section 2.4.1.1.2.2	Invalid operation
3	Factory/ Shipping Mode	Switching between Factory mode and Shipping mode. Adjustment purpose: If the EEPROM of the PU PCB cannot be copied (I/F error, etc.), setting is made on a maintenance replacement PCB. Since the maintenance replacement PCB usually comes set to the Factory mode, it needs to be set to the Shipping mode by this function.	Section 2.4.1.1.2.3	Subsect. 5.3.2.10
4	Replace-ment of CU PCB	Rewrite of the EEPROM set values of the CU PCB. Adjustment purpose: The EEPROM data is rewritten to another CU PCB in the event that the current CU PCB needs to be replaced due to maintenance replacement.	Subsect. 2.4.1.1.3	Invalid operation
5	Serial Number information setup	Selection of the printer serial number recorded on the CU, and rewrite of the output mode and device serial numbers.	Subsect. 2.4.1.1.4.3	Invalid operation
6	Set information of PCB items	Verification of the serial No. information and Factory/Shipping mode.	Subsect. 2.4.1.1.7	Invalid operation
7	USB software update	Update of USB software	Section 2.4.2.2.1	Invalid operation
8	NIC software update	Update of NIC software	Section 2.4.2.2.2	Invalid operation
9	NIC Web Page update	Update of NIC Web Page	Section 2.4.2.2.3	Invalid operation
10	Mac address setup	Setup of Mac address	Section 2.4.2.2.4	Invalid operation

	Item	Adjustment	Section No. of the mainte-nance Utility Operation	Operation on Operator Panel (Section No. corresponds to the Mainte-nance manual)
11	Consu-mable counter mainte-nance function	Copying of consumable part counters Drum counter (Y, M, C, K) Fuser counter Belt counter Toner counter (Y, M, C, K) Adjustment purpose: When half-used consumable parts are diverted to another printer, the value of each consumable part is copied.	Section 2.4.2.2.4	Invalid operation
12	Destina-tion/ PnP information setup	Sets or checks the (CU) destination, device identification and USB identification.	Section 2.4.1.2.9	Section 5.4.3
13	Sending of a specified file	Sends a specified file.	Section 2.4.1.2.15	Unavailable
14	Indication of consu-mable part counters	Verification of the current values of consumable part counters.	Section 2.4.1.3.1	Subsect. 5.1
15	Check of menu set values	Indication of the set values of each menu set on the printer (CU).	Section 2.4.1.3.2	Menu Map print (See User's Manual.)
16	Check of printer information	Verification of the Mac address and versions of various F/Ws of the printer.	Section 2.4.1.3.3	Menu Map Printing (See User's Manual.)
17	Check of mounted CPU/ memory values	Verification of the information of CPU and memory installed on the printer (CPU).	Section 2.4.1.3.4	Menu Map Printing (See User's Manual.)

	Item	Adjustment	Section No. of the mainte-nance Utility Operation	Operation on Operator Panel (Section No. corresponds to the Mainte-nance manual)
18	Test pint	Execution of local print function and transmission of specified files. Adjustment purpose: Verification of individual operation of the printer and transmission of downloaded files.	Section 2.4.1.4.1	Each local print (See System Specification.)
16	Print information check	Checks the Mac address and each firmware version.	Section 2.4.1.3.3	Print a configuration report (Menu Map) (refer to User's Manual).
17	CPU/ Memory value check	Checks the information on the CPU and memory installed on the printer (CU).	Section 2.4.1.3.4	Print a configuration report (Menu Map) (refer to User's Manual).
18	Test print	Executes the local print function and sends a specified file. Purpose: To check the printer on a stand-alone basis and send a download file.	Section 2.4.1.4.1	Perform local printing (refer to System Specification).
19	Switch scan test	Executes the switch scan test. Purpose: To check each sensor for proper operation.	Section 2.4.1.5.1	
20	Motor clutch test	Executes the motor clutch test. Purpose: To check each item, such as a motor or clutch, for proper operation.	Section 2.4.1.5.2	
21	Color registration adjustment test	Executes the color registration adjustment test.	Section 2.4.1.5.3	
22	Density adjustment test	Executes the density adjustment test.	Section 2.4.1.5.4	

	Item	Adjustment	Section No. of the mainte-nance Utility Operation	Operation on Operator Panel (Section No. corresponds to the Mainte-nance manual)
23	Auto density adjustment control parameter setting (must not be used)	Sets the auto density setting control parameter.	Never use this option.	
24	Counter display	Checks the consumable, continuous consumable and waste toner counter values.	Section 2.4.1.5.6	
25	Local parameter setting	Switches between the Factory and Shipping modes and checks the status of the fuse.	Section 2.4.1.5.7	
26	Engine parameter setting	Makes an engine parameter setting.	Section 2.4.1.5.8	
27	Media transfer parameter setting	Makes a print media transfer parameter setting.	2.4.1.5.9	

Note! Items [Prohibited to use] must not be operated/set. There is a risk of abnormal operation of the printer.

5.3 Functions of user's maintenance menu

5.3.1 Maintenance menu (For end users)

There is a maintenance menu category among the normal menu categories. (Different from the system maintenance menus)

The items that can be set under this menu are indicated below.

Maintenance Menu

Values in shaded areas are initial settings.

Category	Operator Panel Display		Function
	Item (Upper Display)	Value (Lower Display)	
Maintenance Menu	MENU RESET	EXECUTE	Resets EEPROM of CU. Restore the user menu setting to the factory default. Selecting "Execute" of the menu exits the menu.
	Save MENU	EXECUTE	Saves the current setting menu. The menu lastly executed is saved and the previous menu is deleted and overwritten. By pressing the Enter switch, the following confirmation message is displayed. ARE YOU SURE? YES/ NO If NO is selected, the screen is returned to the previous menu. If YES is selected, the current menu setting is saved and the menu is exited.
	RESTORE MENU	EXECUTE	Changes menu settings to stored ones. By pressing the Enter switch, the following confirmation message is displayed. ARE YOU SURE? YES/ NO If NO is selected, the screen is returned to the previous menu. If YES is selected, the menu is changed to the stored menu setting, and the menu is exited. * When executing under print data exists, the execution is not performed.
Maintenance Menu	POWER SAVE	ENABLE DISABLE	Sets Power Save mode Enabled/disabled. Shift time to enable Power Save mode can be changed using "POWER SAVE TIME" on "SYSTEM CONFIG. MENU".
	PAPER BLACK SET	0 +1 +2 -2 -1	Corrects print nonuniformity due to temperature variation. With faded images, change the value. With scattering or snowing images in print output of high print density, decrement the value. With faded images in print output of high print density, increment the value.
	PAPER COLOR SET	0 +1 +2 -2 -1	Corrects print nonuniformity due to temperature variation. With faded images, change the value. With scattering or snowing images in print output of high print density, decrement the value. With faded images in print output of high print density, increment the value.
	TRNSPR BLACK SET	0 +1 +2 -2 -1	Used to correct dispersion of printing due to temperature difference. Change the value if a printed transparency film is blurred. If an output shows a scattered- or snowing-like phenomenon in a high-density print part, decrement the value. If an output is blurred, increment the value.
	TRNSPR COLOR SET	0 +1 +2 -2 -1	Used to correct dispersion of printing due to temperature difference. Change the value if a printed transparency film is blurred. If an output shows a scatteredor snowing-like phenomenon in a high-density print part, decrement the value. If an output is blurred, increment the value. This menu is not displayed for Japanese products

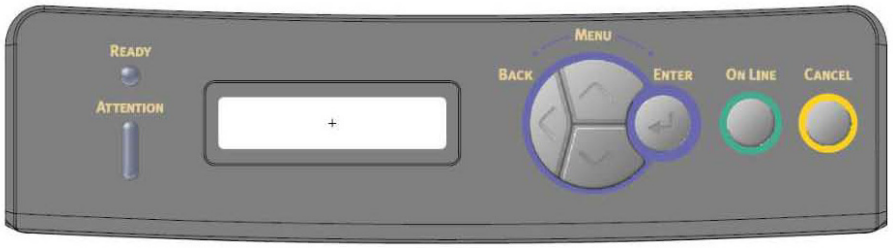
Category	Operator Panel Display		Function
	Item (Upper Display)	Value (Lower Display)	
Maintenance Menu	SMR SETTING	0 +1 +2 +3 -3 -2 -1	Change a correction value for uneven print quality to correct print variations caused by variations in temperature and humidity environment or in print density/frequency.
	BG SETTING	0 +1 +2 +3 -3 -2 -1	Change a correction value for dark-colored paper printing to correct print variations caused by variations in temperature and humidity environment or in print density/frequency.

5.3.2 Self-diagnostic mode

Individual explanation of LEVEL0 and LEVEL1.

5.3.2.1 Operator panel

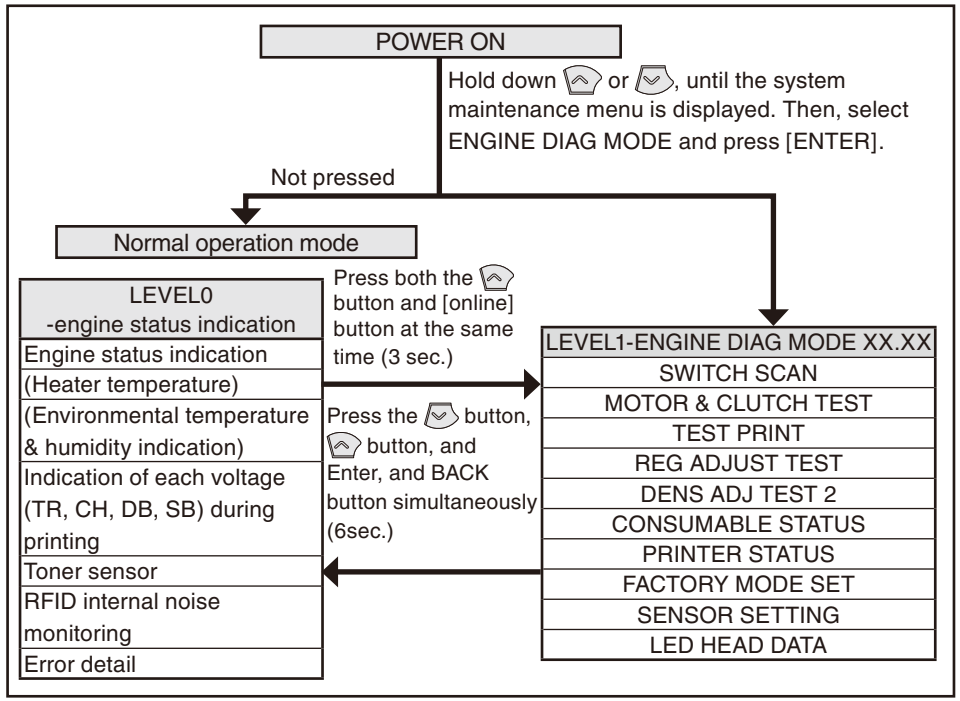
The explanation of the operations relating to the self-diagnosis presupposes, the following operation panel arrangement is required.



Self-diagnostic mode layout (Overall)

(1) Transition of menu items

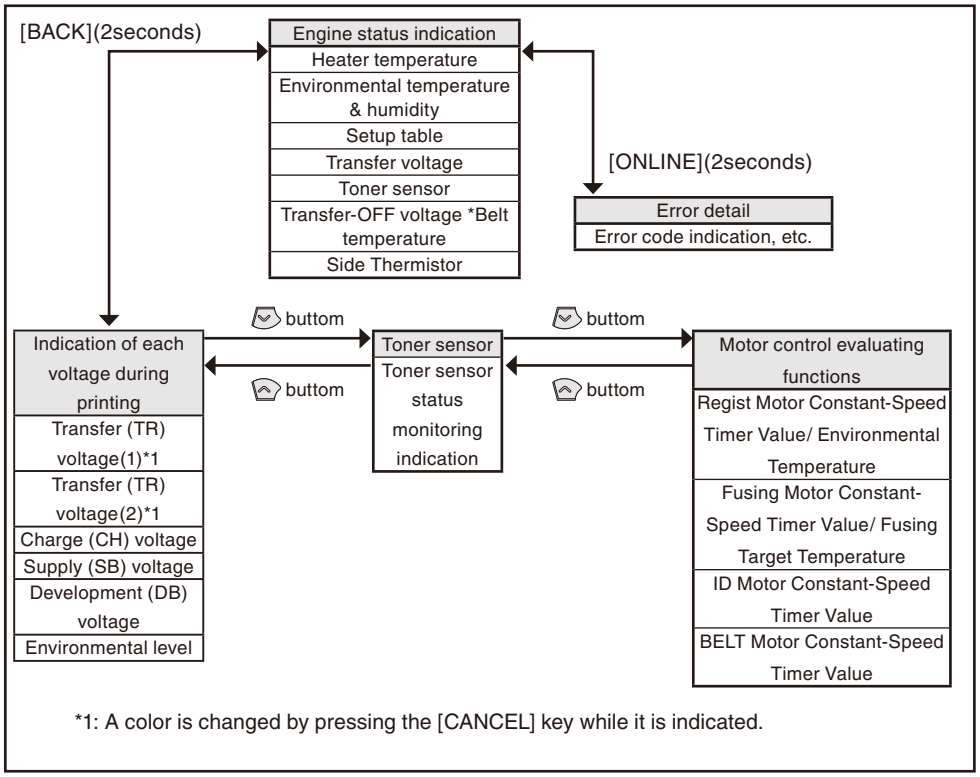
XXXXX	Level transition is possible only when a part is displayed.
XXXXX	Transition of is activated with ▲ or ▼ buttom.


POWER ON
Hold down ▲ or ▼, until the system maintenance menu is displayed. Then, select ENGINE DIAG MODE and press [ENTER].
Not pressed
Normal operation mode
LEVEL0
-engine status indication
Engine status indication
(Heater temperature)
(Environmental temperature & humidity indication)
Indication of each voltage (TR, CH, DB, SB) during printing
Toner sensor
RFID internal noise monitoring
Error detail
Press both the ▲ button and [online] button at the same time (3 sec.)
Press the ▼ button, ▲ button, and Enter, and BACK button simultaneously (6sec.)
LEVEL1-ENGINE DIAG MODE XX.XX
SWITCH SCAN
MOTOR & CLUTCH TEST
TEST PRINT
REG ADJUST TEST
DENS ADJ TEST 2
CONSUMABLE STATUS
PRINTER STATUS
FACTORY MODE SET
SENSOR SETTING
LED HEAD DATA

LEVEL0

(1) Switchover of menu items

XXXX	The transition of xxxxx is activated when [BACK] or [ONLINE] is pressed and held down, or ▲ or ▼ buttom is pressed briefly.
XXXX	The transition of xxxxx is activated with ▲ or ▼ buttom. T h e item selection screen is restored when [BACK] is pressed and held down.



*1: A color is changed by pressing the [CANCEL] key while it is indicated.

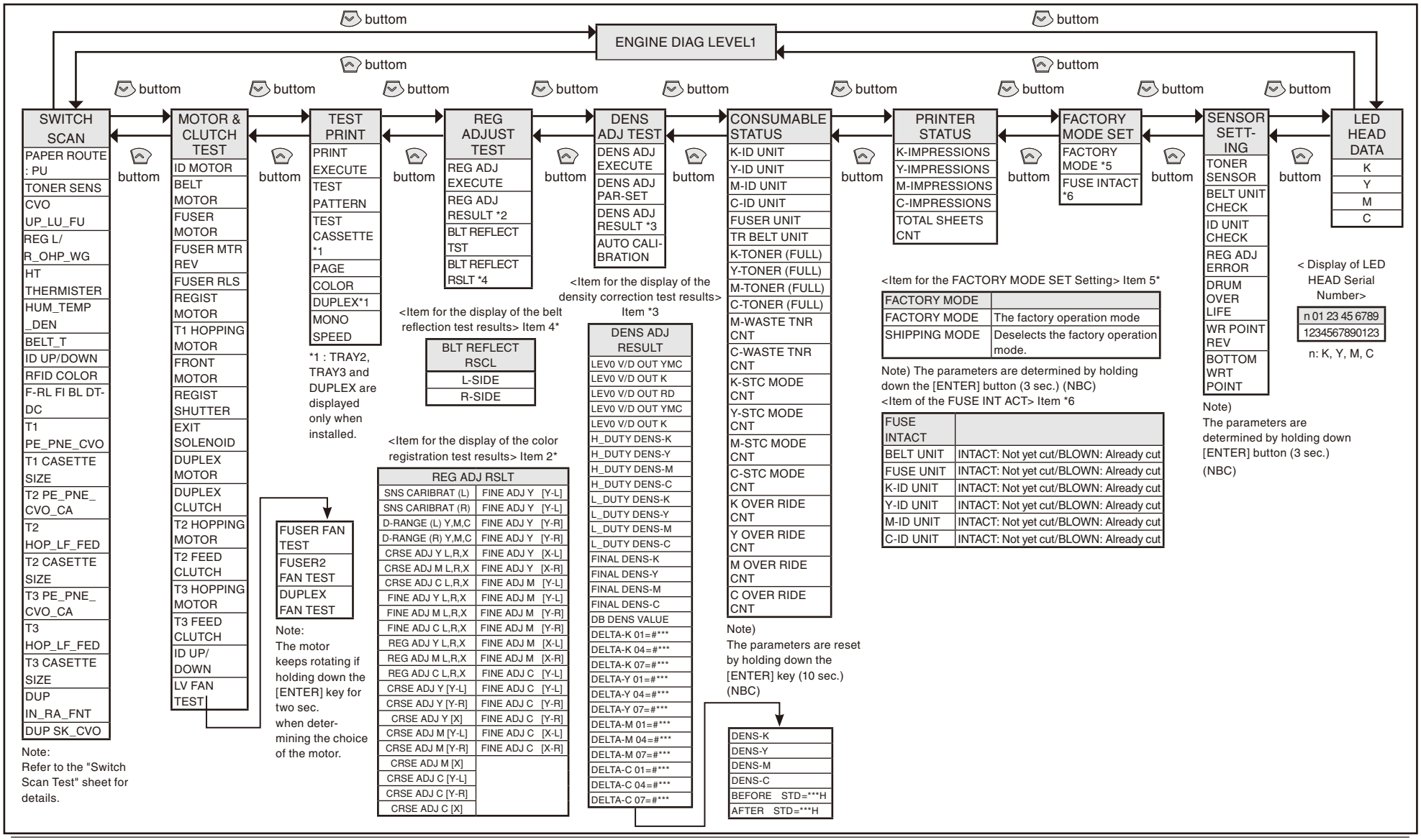
LEVEL1

(1) Switchover of menu items

XXXXX is activated when [BACK] or [ONLINE] is pressed and held down, or ▲ or ▼ buttom is pressed briefly

XXXXX is activated with ▲ or ▼ buttom. The item selection screen is restored when [BACK] is pressed and held down.

Press ENTER to execute a test, and BACK to end the test.



5.3.2.2 Normal self-diagnostic mode (Level 1)

The menus of the normal self-diagnostic mode are indicated below.

	Item	Self-diagnosis Menu	Adjustment	Maintenance Utility
1	Switch scan test	SWITCH SCAN	Checking of inlet sensor and switch	No.18
2	Motor clutch test	MOTOR&CLTCH TEST	Operation test of motor and clutch	No.19
3	Execution of test print	TEST PRINT	Print of test patterns built in PU	Not operable
4	Color drift correction test	REG ADJUST TEST	Judgment of good/bad color drift correction mechanism.	No.20
5	Density correction test	DENS ADJ TEST	Judgment of good/ bad density correction mechanism.	No.21
6	Indication of consumable part counter	CONSUMABLE STATUS	Indication of consumed state of consumables	No.23
7	Indication of consumable part continuance counter	PRINTER STATUS	Indication of lifetime consumed state of consumables	No.23
8	Factory/Shipping mode switching	FACTORY MODE SET	Switching between Factory mode and Shipping mode	No.3
9	Check of Fuse status		Indication of the status of each fuse	No.24
10	Engine parameter setup	SENSOR SETTING	Setup of Enable/Disable of error detection by various sensors	No.25
11	Indication of LED head serial number	LED HEAD DATA	Indication of the serial number of LED head data	Not operable

5.3.2.2.1 Activation method for self-diagnostic mode (Level 1)

1. The system maintenance menu mode is activated when the power is turned on with the MENU and MENU keys held down simultaneously.
2. Press the MENU or MENU key several times, until "ENGINE DIAG MODE" is displayed. Pressing the ENTER key causes "DIAGNOSTIC MODE" to appear.

```
DIAGNOSTICMODE
XX.XX.XX  FACTORY/SHIPPING
```

3. XX.XX.XX of "DIAGNOSTIC MODE XX.XX.XX" which is displayed in the LCD section is the version of the PU firmware. The set value of FACTORY WORKING MODE is indicated in the lower line to the right. Normally, S-MODE for "SHIPPING" is displayed.
4. Pressing the MENU or MENU key takes you to each self-diagnostic step. (The menu items rotate as the MENU+ or MENU- key is pressed.)

5.3.2.2.2 Deactivation of self-diagnostic mode

1. Turn the power off, and on again after ten seconds.

5.3.2.3 Switch scan test

This self-diagnosis is practiced to check the inlet sensors and switches.

1. Activate the self-diagnostic mode (Level 1), press and hold down the MENU or MENU key, until "SWITCH SCAN" appears in the upper line of the display section, and then, press the ENTER key. (The MENU key increments a test item, and the MENU key decrements a test item.)

SWITCH SCAN

2. Press and hold down the MENU or MENU key, until the item corresponding to the unit of Table 5-3 now to be tested appears in the lower line of the display section. (The MENU key increments a test item, and the MENU key decrements a test item.)
3. Pressing the ENTER key initiates the test, and the name and current status of the corresponding unit are displayed.

PAPER ROTE:PU
1=H 2=L 3=H 4=L

   Conduct this operation on each unit (Figure 5-1). The indications are produced in the corresponding LCD display. (The indications vary from one sensor to another. See Table 5-3 for details).

4. Pressing the CANCEL key restores the status of Item 2 above.
5. Repeat Items 2 to 4, as needed.
6. To end the test, press the BACK key. (The status of Item 1 will be restored).

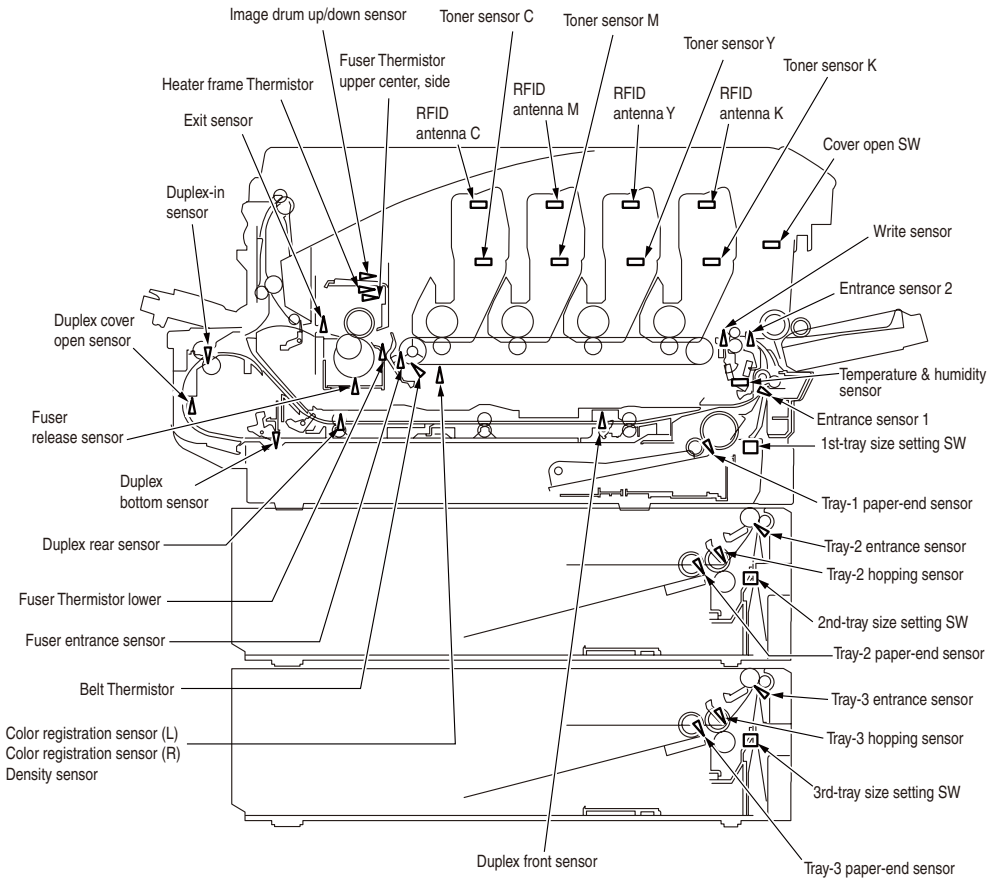


Figure 5-1 Switch sensor position

Table 5-3 SWITCH SCAN Display Detail

<Fuction not provided>An asterisk "*" is displayed in the lower line.

*1: L is displayed when the cover is open.

*2: See section 7.7. The switches for each cassette size are numbered from 1 starting at the left hand side.

Upper line of display section	1		2		3		4	
	Detail	Display	Detail	Display	Detail	Display	Detail	Display
PAPER ROUTE : PU	Entrance sensor 1	H: Paper out L: Paper present	Entrance sensor 2	H: Paper out L: Paper present	Write sensor	H: Paper out L: Paper present	Exit sensor	H: Paper out L: Paper present
TONER SENS	Toner sensor K	H: Blocked L: Reflected	Toner sensor Y	H: Blocked L: Reflected	Toner sensor M	H: Blocked L: Reflected	Toner sensor C	H: Blocked L: Reflected
CVO UP_LU_FU	Cover Open SW	H: Close L: Open						
EG L/R_OHP_WG	Color registration sensor L	AD value: **H	Color registration sensor R	AD value: **H				
HT THERMISTER	Fuser Thermistor upper sensor	AD value: **H	Fuser Thermistor lower sensor	AD value: **H	Fuser Thermistor upper sensor, side	AD value: **H	Heater frame thermistor	AD value: **H
HUM_TEMP_DEN	Humidity sensor	AD value: **H	Temperature sensor	AD value: **H	Density sensor (K)	AD value: **H	Density sensor (YMC)	AD value: **H
BELT_T	Belt Thermistor	AD value: **H						
ID UP/DOWN							ID Up Down sensor	H: Up L: Down
RFID COLOR * 1	RFID antenna K	UID: ***H	RFID antenna Y	UID: ***H	RFID antenna M	UID: ***H	RFID antenna C	UID: ***H
F-RL FI BL DT-DC	Fuser release sensor	H: ON L: OFF	Fuser entrance sensor					
T1 PE_PNE_CVO	TRAY1 Paper End sensor	H: Paper out L: Paper present						
T1 CASETTE SIZE *2	Size Setting SW1	Port level H, L	Size setting SW2	Port level H, L	Size setting SW3	Port Level H, L	Size setting SW4	Port Level H, L
T2 PE_PNE_CVO_CA	TRAY2 Paper End sensor	H: Paper out L: Paper present						
T2 HOP_LF_FED	TRAY2 Hopping sensor	H: Paper out L: Paper present			TRAY2 Entrance Sensor	H: Paper out L: Paper present		
T2 CASETTE SIZE *2	Size Setting SW1	Port level H, L	Size setting SW2	Port level H, L	Size setting SW3	Port Level H, L	Size setting SW4	Port Level H, L
T3 PE_PNE_CVO_CA	TRAY3 Paper End sensor	H: Paper out L: Paper present						
T3 HOP_LF_FED	TRAY3 Hopping sensor	H: Paper out L: Paper present						
T3 CASETTE SIZE *2	Size Setting SW1	Port level H, L	Size setting SW2	Port level H, L	Size setting SW3	Port Level H, L	Size setting SW4	Port Level H, L
DUP IN_RA_FNT	Duplex-In Sensor	H: Paper out L: Paper present	Duplex-rear Sensor	H: Paper out L: Paper present	Duplex-front Sensor	H: Paper out L: Paper present		
DUP SK_CVO	Duplex Bottom Sensor	H: Paper out L: Paper present	Duplex Cover Sensor	H: Paper out L: Paper present				

5.3.2.4 Motor clutch test

This self-diagnosis is practiced to test motors and clutches.

1. Activate the self-diagnostic mode (Level 1), press and hold down the MENU or MENU key, until "MOTOR & CLUTCH TEST" appears in the upper line of the display section, and then, press the ENTER key. (The MENU key increments a test item, and the MENU key decrements a test item.)
2. Press and hold down the MENU or MENU key, until the item corresponding to the unit of Table 5-4 now to be tested appears in the lower line of the display section. (The MENU key increments a test item, and the MENU key decrements a test item.)

MOTOR & CLUTCH TEST
ID MOTOR

3. Pressing the ENTER key initiates the test, causing the unit name to start blinking, and the corresponding unit is driven for ten seconds (See Figure 5-2).

Note! After the unit has been driven for ten seconds, the status of Item 2. above is restored.

- The clutch solenoid repeats ON/OFF operations in a normal printing drive. (Clutches that cannot be driven individually due to their structural reason are driven along with their motors.) * "ID UP/DOWN" continues being driven, until the "CANCEL" key is depressed.
- The motor keeps rotating if holding down the [ENTER] key for two seconds when determining the choice of the motor. (The motor stops when the [CANCEL] key is pressed.)

4. Pressing the CANCEL key stops the drive of the corresponding unit. (The indication of the corresponding unit will be maintained.)
5. Repeat Items 2 to 4, as needed.
6. To end the test, press the BACK key. (The status of Item 1 will be restored).

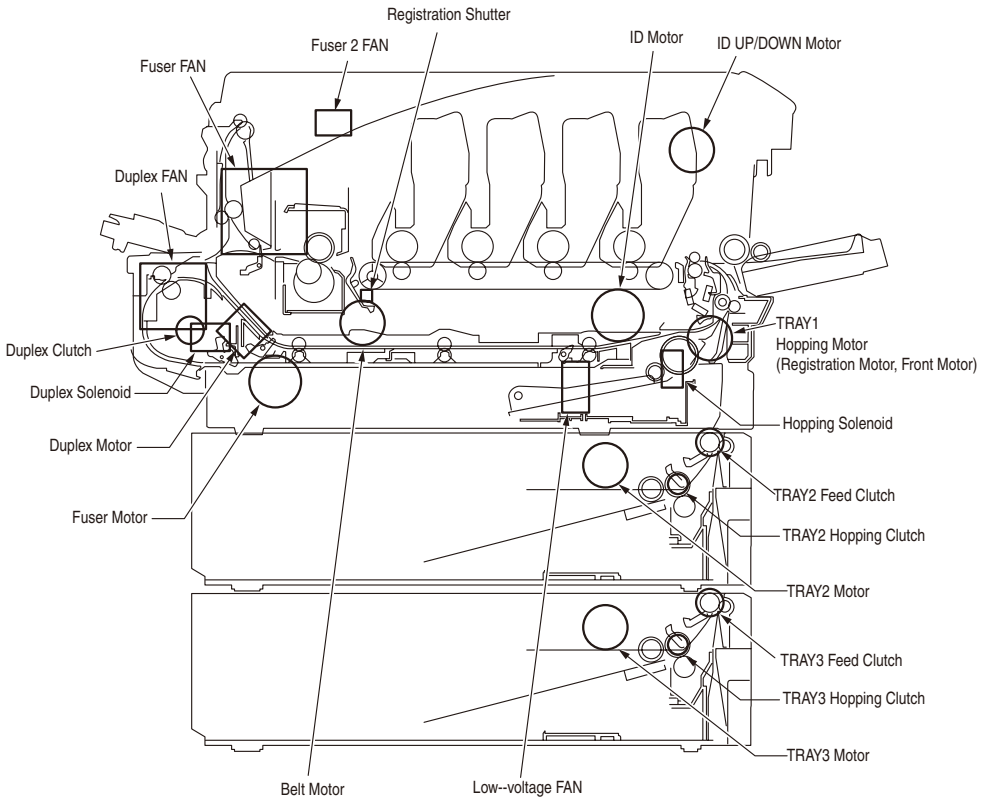


Figure 5-2

Table 5-4

Unit Name	Description of Control for Unit Driving	Remarks
ID MOTOR	To be driven with all the IDs (Black/yellow/magenta/cyan) removed.	–
BELT MOTOR	To be driven with all the IDs (Black/yellow/magenta/cyan) removed.	–
FUSER MOTOR	–	–
FUSER MTR REV	–	–
FUSER_RLS	–	–
REGIST MOTOR	–	–
T1 HOPPING MOTOR	–	–
FRONT MOTOR	–	–
REGIST SHUTTER	–	–
EXIT SOLENOID	–	–
DUPLEX MOTOR	–	–
DUPLEX CLUTCH	–	–
T2 HOPPING MOTOR	–	OPTION
T2 FEED CLUTCH	–	OPTION
T3 HOPPING MOTOR	–	OPTION
T3 FEED CLUTCH	–	OPTION
ID UP/DOWN	In closed state of TOP/FRONT cover	–
LV FAN TEST	–	–
FUSER FAN TEST	–	–
FUSER2 FAN TEST	–	–
DUPLEX FAN TEST	–	–

Note! The ID UP/DOWN processing is displayed while executing it.

```
MOTOR & CLUTCH TEST
ID UP/DOWN      ***
```

***: number of execution

5.3.2.5 Test print

This self-diagnosis is practiced to print test patterns built in PU. Other test patterns are stored in the controller.

This print cannot be used to check the print quality.

To diagnose abnormal images, follow Section 7.

1. Activate the self-diagnostic mode (Level 1), press and hold down the MENU or MENU key, until "TEST PRINT" appears in the upper line of the display section, and then, press the ENTER key. (The MENU key increments a test item, and the MENU key decrements a test item.)
2. The lower line of the display section shows the set items that are applicable to the test print only. Press and hold down the MENU or MENU key, until the corresponding item appears, and press the ENTER key. (The MENU key increments a test item, while the MENU key decrements a test item.) (If the set values of the items are not necessary (Default settings), go on to Item 5.)
3. When the ENTER key is depressed after holding down the MENU or MENU key in Item 2 above, a set item is displayed in the upper line of the display section, and a set value, in the lower line. Pressing the MENU key increments the set value, and pressing the MENU key decrements it (the set value finally displayed will be applied). Pressing the BACK key defines the value and restores Item 2. Repeat Item 3, as needed.

TEST PATTERN
1

Indication	Set value	Function
PRINT EXECUTE	–	Pressing the ENTER key initiates print and pressing the CANCEL key ends the print (Page by page).
TEST PATTERN	0	0: Blank sheet print 1 - 7: See the following page (Pattern print). 8 - 15: Blank sheet print
TEST CASSETTE	TRAY1	Select the paper feed source. If TRAY 2 or TRAY3 is not mounted, indication of TRAY2 or TRAY3 will not be produced.
	TRAY2/3	
	MFP	
PAGE	0000	Setup of the number of test-print pages
COLOR	ON	Select between Color print or Monochrome print. * If ON is specified, ON/OFF needs to be specified for each color.
	OFF	
DUPLEX	2 PAGES STACK	Two-sided print is conducted with two-page stack. OFF is selected for two-sided print. Two-sided print is conducted with one-page stack.
	OFF	
	1PAGES STACK	
MONO SPEED	LOW	Selects a monochrome-print speed: LOW : 30 ppm HIGH : 32 ppm
	HIGH	

- " ☐ " denotes a default value. Items set here are valid only in this test mode (Not written to the EEPROM).

Notes! PAGE setup..... After shifting the digit of the set value with the MENU or MENU key, press the ONLINE key. The set value will be incremented. Pressing the CANCEL key decrements it.

COLOR setup: ..... Pressing the ENTER key after selecting ON causes the data indicated below to appear on the panel.

Print setup for each color .. Pressing the MENU key or MENU key activates shifting.

Pressing the ONLINE key or CANCEL key switches between ON and OFF. Pressing the BACK key restores the original panel indications.

COLOR	→	Y:ON M:ON
ON		C:ON K:ON

4. When the ENTER key is depressed while "PRINT EXECUTE" remains displayed in the lower line of the display section in the operation of Item 2., the test print takes place with the set values specified in Items 2 and 3.

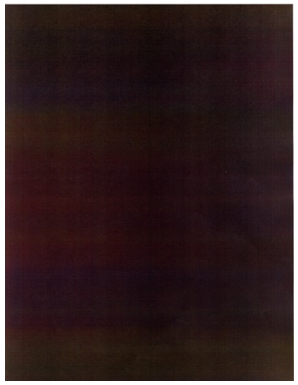
   Pressing the CANCEL key stops the test print.

   If any of the alarms indicated in the Detail column of the table below is detected when test print is started or during execution, it will be indicated on the panel, and the test print will be interrupted. (For details on the errors, see Subsection 5.3.2.14 Details of panel indications. In the case of a PU test print, the comments displayed will be different.)

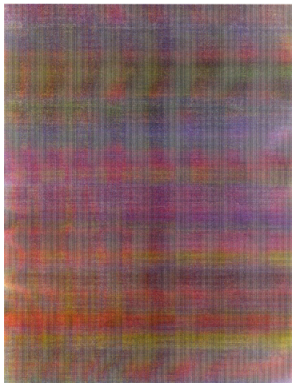
Panel Display	Detail
PAPER END SELECTED TRAY	The tray is out of paper.
DUPLEX UNIT IS NOT INSTALLED	A duplex unit is not installed.
SELECTED TRAY IS NOT INSTALLED	The selected tray is not installed.
REMOVE PAPER OUT OF DUPLEX	An internal error of the duplex unit occurred.

Print Patterns (Cannot be used for checking print quality.)

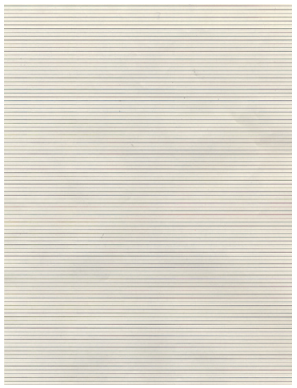
Patterns 0 and 8 to 15 ... Blank sheet print



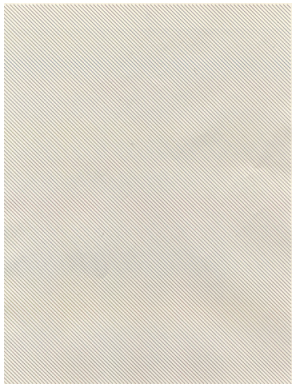
Pattern 1



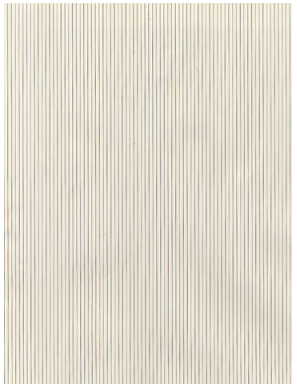
Pattern 2



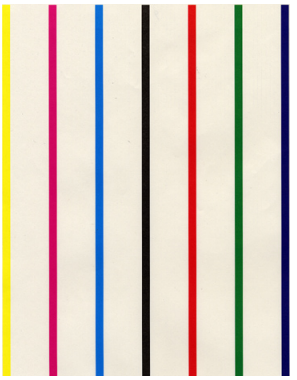
Pattern 3



Pattern 4



Pattern 5



Pattern 6

Pattern 7

Note! If the solid print (Pattern 7) available among the local print functions is conducted with 100% of each color, offset will take place. To prevent this offset, it will be necessary to make the print setup of each color as specified in 3 of Subsection 5.3.2.5 and to limit the colors to be printed simultaneously to two or less when conducting the solid print No. 7.

• When print is executed, the following message is displayed:

```
P=***
W=***
```

P : Number of test-print pages (Unit: sheets)

W : Print wait time (Unit: seconds)

• Pressing the MENU key switches over the indication.

```
T=*** U=***[###]
H=***%L=***[###]
```

U : *** = Measured value of upper heater temperature [Unit: ˚C]
[###] = Target temperature for print execution [Unit: ˚C]

L : *** = Measured value of lower thermistor [Unit: ˚C]
[###] = AD value of lower thermistor reading [Unit: HEX]

T : Measured value of environmental temperature [Unit: ˚C]

H : Measured value of environmental humidity [Unit: %]

• Pressing the MENU key switches over the indication.

```
KTR=*.** YTR=*.**
MTR=*.** CTR=*.**
```

YTR, MTR, CTR and KTR denote the transfer voltage set values of the respective colors (Unit: KV).

• Pressing the MENU key switches over the indication.

```
KR=*.** YR=*.**
MR=*.** CR=*.**
```

KR : BLACK transfer roller resistance value [Unit: uA]

YR : YELLOW transfer roller resistance value [Unit: uA]

MR : MAGENTA transfer roller resistance value [Unit: uA]

CR : CYAN transfer roller resistance value [Unit: uA]

• The above displays are switched to the following by pressing the MENU key.

```
ETMP=***UTMP=***
REG=****EXT=***
```

ETMP : A parameter for correction of constant hopping motor speed (an environmental temperature) (in decimal).

UTMP : A parameter for correction of constant fuser motor speed (a target fusing temperature) (in decimal).

REG : A hopping motor constant-speed timer value (a set input/output value) (in hex).

EXT : A fuser motor constant-speed timer value (a set input/output value) (in hex).

• Pressing the MENU key switches over the indication.

```
ID=****
```

KID, YID, MID and CID denote the constant-speed timer values of the respective ID motors (I/ O set values) [Unit: HEX].

• Pressing the MENU key switches over the indication.

```
BELT=****
FRM [***] ( xxx )
```

BELT : Constant speed timer value of belt motor (I/O set value) [Unit: HEX]

FRM : [***] = AD value of frame thermistor reading [Unit: HEX]
(xxx) = Frame temperature [Unit: ˚C]

• Pressing the MENU key switches over the indication.

```
DB:k**y**m**c**
```

DB : Development voltage setup table ID No. [Unit: HEX]

• Pressing the MENU key switches over the indication.

TR1:k**y**m**c**
TR2:k**y**m**c**

TR1 : Transfer voltage parameter VTR1 table ID No. [Unit: HEX]
TR2 : Transfer voltage parameter VTR2 table ID No. [Unit: HEX]

• Pressing the MENU key switches over the indication.

TROFF:**
BELT xxx(***)

This menu option is displayed but doesn't work.

5. Repeat Items 2 to 4, as needed.
6. Press the CANCEL key to terminate the test. (Status of Item 1 restored)

5.3.2.6 Color registration adjustment test

This self-diagnosis is utilized to adjust color registration of the printer and to locate the cause of color misregistration.

If any error occurs during a color registration test, restore the normal operation of the printer by following “Outline of color drift correction” of Chapter 2.

1. Activate the self-diagnostic (Level 1) mode, and press and hold down the [MENU] key or [MENU] key, until the following message appears.

REG ADJUST TEST

2. Pressing the [ENTER] key causes the following message to appear. Press and hold down the MENU or MENU key, until the intended item is displayed.

REG ADJUST TEST
REG ADJ EXECUTE

3. Pressing the [ENTER] key executes the test of the item currently displayed on the panel.

   <<REG ADJ RESULT is executed>>

   (1) Color registration adjustment test is conducted. ([READY] light blinking)

   (2) When the test ends, the test result (OK or error name) appears in the upper line of the display section, and **** RESULT, in the lower line.

OK
REG ADJ RESULT

   Pressing the [MENU] key increments the test result sequentially in the display.

   Pressing the [MENU] key decrements the test result sequentially in the display.

   Pressing the [BACK] key restores the status of Item 2.

   (3) Pressing the [CANCEL] key while the test is under way aborts the test ([READY] light comes on) and restores the status of Item 2.

   <<REG ADJ RESULT is executed>>

   The same as the key operation in the execution of REG ADJ EXECUTE (2).

   << BLT REFLECT TEST is executed>>

   (1) A color drift belt reflection test is conducted. ([READY] light blinking)

   (2) When the test ends, the test result (OK or error name) appears in the upper line of the display section, and **** RESULT, in the lower line.

OK
BLT REFLECT RSLT

   Pressing the [MENU] key increments the test result sequentially in the display.

   Pressing the [MENU] key decrements the test result sequentially in the display.

   Pressing the [BACK] key restores the status of Item 3.

   (3) Pressing the [CANCEL] key while the test is under way aborts the test ([READY] light comes on) and restores the status of Item 3.

<<BLT REFLECT RSLT is executed>>

The same as the key operation of Item . in the execution of BLT REFLECT TEST.

4. Repeat Items 2 and 3, as needed.
5. Press the [BACK] key to terminate the test. (Status of Item 1 restored)

Color registration adjustment test items

Display	Function
REG ADJ EXECUTE	Execution of Color registration adjustment
REG ADJ RESULT	Viewing of the Color registration adjustment result
BLT REFLECT TEST	Execution of the judgment of good or bad Color registration adjustment belt reflectivity
BLT REFLECT RSLT	Viewing of the result of judgment of good or bad Color registration adjustment belt reflectivity

5.3.2.7 Print density adjustment test

This self-diagnosis is performed to test on the print density adjustment function of the printer and to view the result.

This test is also performed to judge whether the print density adjustment mechanism works normally or not.

If any error occurs during a print density test, restore the normal operation of the printer by following “Outline of density correction method” of Chapter 2.

1. Activate the self-diagnostic (Level 1) mode, and press and hold down the MENU or MENU key, until the following message appears:

DENS ADJ TEST

2. Pressing the [ENTER] key causes the following message to appear. Press and hold down the MENU or MENU key, until the intended item is displayed.

DENS ADJ TESTZ
DENS ADJ EXECUTE

3. Pressing the [ENTER] key executes the test of the item currently displayed on the panel.

<< DENS ADJ EXECUTE is executed>>

(1) A density correction test is conducted. ([READY] light blinking)

(2) When the test ends, the test result (OK or error name) appears in the upper line of the display section, and **** RESULT, in the lower line.

OK
DENS ADJ RESULT

Pressing the [MENU] key increments the test result sequentially in the display.

Pressing the [MENU] key decrements the test result sequentially in the display.

Pressing the [BACK] key restores the status of Item 2.

(3) Pressing the [CANCEL] key while the test is under way aborts the test ([READY] light comes on) and restores the status of Item 2.

<<DENS ADJ RESULT is executed>>

The same as the key operation of Item in the execution of DENS ADJ EXECUTE.

<<DENS ADJ PAR-SET is executed>> Indication only, without functionality.

<<AUTO CALIBRATION is executed>>

(1) Automatic setting of a density sensor sensitivity correction value is made. ([READY] light blinking)

(2) When the test ends, the test result (OK or error name) appears in the upper line of the display section, and **** RESULT, in the lower line.

OK
DENS ADJ RESULT

Pressing the [MENU] key increments the test result sequentially in the display.

Pressing the [MENU] key decrements the test result sequentially in the display.

Pressing the [BACK] key restores the status of Item 2.

(3) Pressing the [CANCEL] key while the test is under way aborts the test ([READY] light comes on) and restores the status of Item 2.

4. Repeat Item 3, as needed.
5. Press the [BACK] key to terminate the test. (Status of Item 1 restored)

Density correction test items

Display	Function
DENS ADJ EXECUTE	Execution of Print density adjustment
DENS ADJ PAR-SET	Indication is given, without functionality.
DENS ADJ RESULT	Viewing of Print density adjustment result
AUTO CALIBRATION	Automatic setting of Print density adjustment value

5.3.2.8 Indication of consumable part counters

This self-diagnosis is practiced to indicate the consumed states of consumable parts.

1. Activate the normal self-diagnostic mode, and press and hold down the [MENU] key or [MENU] key, until "CONSUMABLE STATUS" appears in the display section, and then, press the ENTER key. (The MENU key increments a test item, and the MENU key decrements a test item.)
2. Pressing the [MENU] key or [MENU] key causes the consumed states of consumable parts to be displayed sequentially. (ONLINE and CANCEL keys inactive to pressing)
3. Press the [BACK] key to terminate the test. (Status of Item 1 restored)

Display Upper	Display Lower	Format	Unit	Function
K-ID UNIT	********IMAGES	DEC	Images	The number of rotation after a new TONER ID of each color was attached. The number is converted into A4 3Page/ Job.
Y-ID UNIT	********IMAGES	DEC	Images	
M-ID UNIT	********IMAGES	DEC	Images	
C-ID UNIT	********IMAGES	DEC	Images	
FUSER UNIT	********PRINTS	DEC	Prints	The number of sheets after a new FUSER unit was attached.
TR BELT UNIT	********IMAGES	DEC	Images	The number of sheets after a new BELT unit was attached.
K-TONER (FULL)	********%	DEC	%	The number of use of each color TONER.
Y-TONER (FULL)	********%	DEC	%	
M-TONER (FULL)	********%	DEC	%	
C-TONER (FULL)	********%	DEC	%	
M-WASTE TNR CNT	********TIMES	DEC	Times	The number of disposal TONER count. *Disposal TONER becomes full in more than 32times.
C-WASTE TNR CNT	********TIMES	DEC	Times	
K-STC MODE CNT	********TIMES	DEC	Times	The printing dot counts of each color TONER cartridge. (The count is NOT reset by replacing cartridge.)
Y-STC MODE CNT	********TIMES	DEC	Times	
M-STC MODE CNT	********TIMES	DEC	Times	
C-STC MODE CNT	********TIMES	DEC	Times	
K OVER RIDE CNT	********TIMES	DEC	Times	The number of times that each color TONER cartridge life was extended.
Y OVER RIDE CNT	********TIMES	DEC	Times	
M OVER RIDE CNT	********TIMES	DEC	Times	
C OVER RIDE CNT	********TIMES	DEC	Times	

5.3.2.9 Indication of printed page counters

This self-diagnosis is practiced to indicate the current number of printed pages of the printer.

1. Activate the normal self-diagnostic mode, and press and hold down the [MENU] key or [MENU] key, until "PRINTER STATUS" appears in the display section, and then, press the ENTER key. (The MENU key increments a test item, and the MENU key decrements a test item.)
2. Pressing the [MENU] key or [MENU] key causes the current number of printed pages to be displayed sequentially. (ONLINE and CANCEL keys inactive to pressing)
3. Press the [BACK] key to terminate the test. (Status of Item 1 restored)

Display Upper	Display Lower	Format	Unit	Function
K-IMPRESSIONS	********IMAGES	DEC	Images	The printing number of sheets of each color.
Y-IMPRESSIONS	********IMAGES	DEC	Images	
M-IMPRESSIONS	********IMAGES	DEC	Images	
C-IMPRESSIONS	********IMAGES	DEC	Images	
TOTAL SHEET CNT	********COUNTS	DEC	Prints	The indication of the total printing number of sheets

5.3.2.10 Factory/Shipping switching

This self-diagnosis is practiced to switch the PU (PRN) PCB between the Factory mode and the Shipping mode.

1. Activate the self-diagnostic (Level 1) mode, and press and hold down the [MENU] key or [MENU] key, until the following message appears.

```
FACTORY MODE SET
```

2. Pressing the [ENTER] key causes the following message to appear. Press and hold down the [MENU] key or [MENU], until the intended item (See the table below) is displayed.

```
FACTORY MODE
SHIPPING MODE       *
```

3. Pressing the [ENTER] key while the desired set item remains displayed selects the set value.
4. Pressing and holding down (3 sec) the [ENTER] key while the value you want to set remains displayed registers the currently displayed value on the EEPROM. Then, the status of Item 2 will be restored.
5. Repeat Items 2 to 4, as needed.
6. Press the [BACK] key to terminate the test. (The status of Item 1 is restored.)

Indication	Set Value	Function
FACTORY MODE	FACTORY MODE	For setting the Factory Work mode (Fuse-cut disabled mode).
	SHIPPING MODE	For canceling the Factory Work mode and enabling the fuse-cut function.
FUSE INTACT Note: ****** is either INTACT or BLOWN.	BELT UNIT ******	For checking the FUSE status of the transfer belt unit.
	FUSE UNIT ******	For checking the FUSE status of the fuser unit.
	K-ID UNIT ******	For checking the FUSE status of the K-ID unit.
	Y-ID UNIT ******	For checking the FUSE status of the Y-ID unit.
	M-ID UNIT ******	For checking the FUSE status of the M-ID unit.
	C-ID UNIT ******	For checking the FUSE status of the C-ID unit.

5.3.2.11 Setup of self-diagnostic function

This self-diagnosis is practiced to Enable/Disable the error detections of the different types of sensors.

The error detections can be disabled or enabled temporarily for troubleshooting purposes.

However, this function should be exercised with utmost care, since it is able to set some items that require specialized knowledge in the field of operation of the engine.

After the function has been used, the set values must always be reset to the defaults.

1. Activate the self-diagnostic (Level 1) mode, and press and hold down the [MENU] key or [MENU] key, until the following message appears.

SENSOR SETTING

2. Pressing the [ENTER] key causes the following message to appear. Press and hold down the [MENU] key or [MENU], until the intended item (See the table below) is displayed.

TONER SENSOR
ENABLE *

3. Pressing the [ENTER] key allows to select the set value in the lower line of the display section.
   Pressing the [MENU] key increments the set value.
   Pressing the [MENU] key decrements the set value.
4. Pressing and holding down (3 sec) the [ENTER] key while the value you want to set remains displayed registers that value on the EEPROM. Then, the status of Item 2 will be restored.
5. Repeat Items 2 to 4, as needed.
6. Press the [BACK] key (except for the status of Item 4.) to terminate the setup. (Status of Item1 restored)

Indication	Set Value	Operation of Set Value	Function
TONER SENSOR	ENABLE	Detects.	For enabling/ disabling toner sensor operation.
	DISABLE	Does not detect.	
BELT UNIT CHECK	ENABLE	Checks	For enabling/disabling checking operation for mounted belt unit.
	DISABLE	Does not detect.	
ID UNIT CHECK	ENABLE	Checks	For enabling/disabling checking operation for mounted ID unit.
	DISABLE	Does not detect.	
REG ADJUST ERROR	ENABLE	Stops.	For enabling/disabling the stop of error issuance, based on color drift detection value.
	DISABLE	Does not detect.	
DRUM OVER LIFE	STOP	Does not extend life.	For enabling/disabling extending the drum life.
	CONTI-NUANCE	Extends life.	
WR POINT REV	0~±2mm	Adjust the print start position	
BOTTOM WRT POINT	0~±2mm	Adjust the print end position	

Shaded part: Denotes the default.

5.3.2.12 Indication of LED head serial number

This self-diagnosis is practiced to check whether a downloaded LED head data matches the serial number of the actual LED head.

1. Activate the self-diagnostic mode, and press and hold down the [MENU] key or [MENU] key, until "LED HEAD DATA" appears in the upper line of the display section, and then, press the ENTER key. (The MENU key increments a test item, and the MENU key decrements a test item.)
2. Pressing the [MENU] key or [MENU] key causes the serial numbers of the K/Y/M/C LED head data to be displayed sequentially.
3. Press the [BACK] key to terminate the test. (Status of Item 1 restored)

K ** ** ** ****
xxxxxxxxxxxxx

** ** ** **** : Rev Number
xxxxxxxxxxxxx : Serial Number

5.3.3 Various types of print on the individual printer equipped with controller

Menu Map print

Print program version and information of CU configuration.

Operation:

(1) Press the "ENTER" button to cause [Information Menu] to be displayed.

(2) Press the "ENTER" button to cause [PRINT MENU MAP/EXECUTE] to appear.

(3) Press the "ENTER" button.

Network Information Print

Operation:

(1) Press the "ENTER" button to cause [Information Menu] to be displayed.

(2) Press the "ENTER" button

(3) Press the MENU button several times to cause [Network Information/ EXECUTE] to appear.

(4) Press the "ENTER" button.

Or, press and hold down for two seconds or longer the push switch above the network connector on the back of the printer main unit.

Demonstration Print

Print a demonstration pattern of each act built in ROM.

Operation:

(1) Press the "ENTER" button to cause [Information Menu] to be displayed.

(2) Press the "ENTER" button.

(3) Press the MENU button several times to cause [DEMO1/EXECUTE] to appear.

(4) Press the "ENTER" button.

5.3.4 Functions of keys when depressed at power-on

The different keys provide the following functions when the power is turned on to the printer. The following keys turn effective when pressed and held down, until "RAM CHECK" is displayed in the upper line of the LCD, and three to four asterisks "*" in the lower line.

(1) BACK key & ONLINE key & CANCEL key

These keys launch the CU program without activating the objects which were added in the download mode, etc.

(2) MENU key & MENU key

These keys launch the system maintenance menu.

(3) BACK key & MENU key & ENTER key

These keys start the printer in the mode in which it remains permanently ONLINE, in disregard of warnings/errors (Factory-support function).

(4) ONLINE key

This key starts the printer in the dedicated mode in which objects, such as network, USB, etc., are downloaded.

(5) ENTER key

This key launches the Admin menu.

(6) Menu key

This key starts the PRINT STATISTIC menu.

5.4 Setup after replacement of parts

This subsection describes the necessary adjustments to be made when parts have been replaced.

Replaced Part	Adjustment
LED Head Note)	Not necessary
Image Drum Cartridge (Y, M, C, K)	Not necessary
Fuser Unit	Not necessary
Belt Unit	Not necessary
PU (PU PCB)	Necessary to copy EEPROM information. Utility required.
CU(SP2 PCB)	Copy information of the EEPROM. ,The Utility is necessary.
CU (CU PCB)	Necessary to copy EEPROM information. Utility required.

Note) See section 4.2.6, LED Assy. for compatibility of replacement LEDs with the LEDs to be replaced with them, and identification of those LEDs.

5.4.1 Precautions on the replacement of engine control PCB

1. When EEPROM of the PCB to be removed is accessible

   (When SERVICE CALL 104 [Engine EEPROM Error] is not displayed)

   (1) Read the EEPROM information from the PCB to be removed by using the PU PCB replacement function (Subsection 2.4.1.1.1 PU PCB replacement function in the Maintenance Utility Operation Manual), and save it provisionally on the HDD of the PC.

   (2) Copy the EEPROM information saved on the HDD to the EEPROM of the PCB to be newly installed, by using the PU PCB replacement function (Subsection 2.4.1.1.1 PU PCB replacement function in the Maintenance Utility Operation Manual).

Note! To download and write the EEPROM information by the maintenance utility, access the EEPROM after placing the printer in the "Forced ONLINE mode" by the procedure described below. Notice that, if the printer has an error currently issued, the error is also displayed in the Forced ONLINE mode.

1. When turning on the printer, press and hold down the [BACK]+[MENU]+[ENTER] keys, until "STATUS MODE" is displayed on the operator panel.
2. Thereafter, the "ONLINE" indication will appear if the printer is in normal condition.
   If the printer has an error, it will be displayed. However, the printer is in ONLINE status internally and, therefore, ready to hold communication.

2. When EEPROM of the PCB to be removed is inaccessible

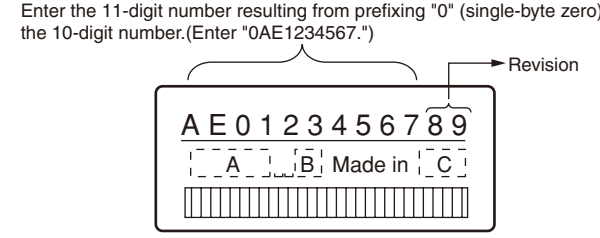
   If the PCB to be removed causes SERVICE CALL 104 (Engine EEPROM Error) to be displayed on the operator panel, or the EEPROM data cannot be downloaded, first replace it with a new PCB, and then, work by the following procedure using the maintenance utility:

   (1) Setup of PU Serial Number

   (Subsection 2.4.1.2 Setup of PU PCB of the Maintenance Utility Operation Manual)

   The printer has a SAP Serial Number applied. The 12-digit SAP Serial Number is marked in the top line of the serial number label, and is made up of two digits for production base, two digits for manufacturing year and month, six digits for serial No. (Sequence No.), and two digits for Revision.

   - The PU Serial Number is a 10-digit number excluding the two digits for Revision from the 12-digit SAP Serial Number.
   - Set in the “2.4.1.1.2 PU serial number setting” screen of “2.4.1.1.2.1 PU board setting” of the maintenance utility.
   - To specify a PU Serial Number, enter a 11-digit number prefixed with "0" (single-byte zero). (Notice that, when the PU Serial Number is read, it is a 10-digit number.)
     On the "PU Serial Number setup" screen, enter the 11-digit number resulting from prefixing a single-byte zero to the 10-digit number which is obtained by excluding the two digits for Revision, shown in the image diagram below, from the serial number on the "PU Serial Number setup" screen.



Serial number label image

   - The PU Serial Number is output in the Printer Serial Number field of the Menu Map header section. For this reason, check of PU serial Number is performed by printing Menu Map.

(2) Switching to Shipping mode

When the engine control PCB has been replaced with a new one, the printer still is in the Factory Work mode. Switch it to the Shipping mode.

- Make the switching on the "Subsection 2.4.1.1.2.2 Factory/Shipping mode" screen in "Subsection 2.4.1.1.2 PU PCB setup function" of the maintenance utility.

Note! When the EEPROM (engine control PCB) has been replaced, the service life information of the belt, toner, IDs, etc., is necessarily cleared. Therefore, be aware that the service life management is likely to suffer errors until the next time units are replaced. The counts that are cleared when the EEPROM is replaced are those indicated below. Since the counts, except for Total Sheets Fed, are cleared when the respective units are replaced, the errors will be resolved at that point in time.

Item	Description	Count Description
Fuser Unit	Fuser unit life count	Number of printed pages since the installation of a new fuser unit, converted into a number of A4-size sheets.
Belt unit	Belt unit life count	Number of printed pages since the installation of a new belt unit, converted into a number of A4-size sheets.
ID unit - Black ID unit - Yellow ID unit - Magenta ID unit - Cyan	Respective life counts of image drum units	Number of revolutions since the installation of a new ID unit, converted into a number of A4-size sheets.
Total number of sheets fed	Printer life count	Total number of sheets fed
Pages - Black Pages - Yellow Pages - Magenta Pages - Cyan	Respective numbers of pages impressed (images) with image	Numbers of pages impressed (images) from installation of new image drum units.

5.4.2 Setup of EEPROM after replacement of CU PCB

When the CU PCB is replaced, it is necessary for the new replacement PCB to take over the user-settings that the user has been using to that point, For this, copy the EEPROM by the Maintenance Utility, and set up the CU Serial No. However, if SERVICE CALL 40 is issued and the old EEPROM cannot be used, use the new PCB, and set the CU Serial No.(See Subsection 5.4.2.2) and check the setup of destination (See Subsection 5.4.3).

5.4.3 Setup of destination [Checking method: Menu Map Print]

The destination is set prior to shipping out of a maintenance PCB. (Maintenance PCBs area available for each destination.) Basically, you don't need to change the destination settings.

The important information about settings will be cleared if you change the destination setting.

Note! This setting is stored on the EEPROM of the CU PCB.

1. Setup on the operation panel: Start the printer in the maintenance mode, and set the destination.
   - Turn on the power with the MENU and MENU key held down.
   - By pressing ENTER key after "SYSTEM MAINTE" is displayed briefly, "ENTER PASSWORD" will be displayed. By pressing a password, the display will change to "OKIUSER".
   - Press the ENTER key.
   - "OEL" will appear in the lower line of the LCD.
   - Press the ENTER key, select the destination by operating the MENU or MENU key, and press the ENTER key.
   - Press the BACK key to define the setting. "JPI"
   - Press the BACK key twice, or the ONLINE key once. This will cause the printer to restart with the destination modified.
2. Explanation

   This printer is ROM used in common for domestic and overseas markets.

   This setting is stored on the EEPROM of the CU PCB.

   When the version number of the program ROM is changed, the setting will be reset to the default value.

5.5 About the manual setup of Print density adjustment

The printer is shipped out of the factory with its automatic density correction mode set to "Auto". However, if that mode is changed to "Manual" by the user, the density setting may be displaced with the use along the time. Execute this manual setup when the density appears below par.

Note! Make the setup when the printer remains at a standstill. Do not conduct it during warming-up.

(1) Press the MENU or MENU key several times, and when [COLOR MENU] is displayed, press the ENTER key.

(2) Press the MENU or MENU key to cause [DENSITY ADJUSTMENT/ RESET] to be displayed.

(3) Press the ENTER key. [ONLINE/ DENSITY ADJUSTING] is displayed, and Automatic Print Density Adjustment will start.

5.6 Administrator Menu List of the Printer

This menu can specify Enable/ Disable of each category of the user menus. The categories of Disable are not displayed on the user menu.

This menu should be used only by the system administrator.

How to Change

❶ Turn off the printer.

Memo Refer to “Turning off the printer” in Section 3.5.2 for how to turn off the printer.

❷ Turn of the printer while pressing the Enter key .

Release the key when [ADMIN MENU] is displayed.

❸ Press the ENTER key.

❹ After [ENTER PASSWORD] is displayed, press the Menu key or Menu key several times to display the first digit of the password. Then, press the ENTER key.

Enter the password of 6th to 12th digits as the same step.

Memo The default of the password is “aaaaaa”.

❺ Press the Menu key several times to display the category to be set.

❻ Press the ENTER key.

❼ Press the Menu key or Menu key several times to display an item to be set.

❽ Press the ENTER key.

Note! In the initialization of the flash memory, “ARE YOU SURE?” is displayed. Check again whether to execute.

When executing, press the Menu key or Menu key to display “YES”, and then, press the ENTER key.

The printer reboots automatically. After [PLEASE POW OFF/ SHUTDOEN COMP] is displayed, turn off and on the power. Each change is made.

❾ Press the Menu key or Menu key several times to display [Set Value].

❿ Press the ENTER key to add [*] to the right side of the value.

⓫ Press the ONLINE switch to be [Toner Gauge Display].

Category	Display of Operation Panel		Description
	Set Value (Upper)	Set Value (Lower)	
OP MENU	ALL CATEGORY	ENABLE DISABLE	Sets ENABLE/ DISABLE of all categories in the user menu.
	PRINT JOBS MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of print job menu.
	INFOR-MATION MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the information menu.
	SHUTDOWN MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the shutdown menu.
	PRINT MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the print menu.
	MEDIA MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the media menu.
	COLOR MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the color menu.
	SYS CONFIG MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the system configuration menu.
	USB MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the USB menu.
	NETWORK MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the NETWORK menu.
	MEMORY MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the memory menu.
	SYS ADJUST MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the system adjustment menu.
	MAINTENANCE MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the maintenance menu.

Category	Display of Operation Panel		Description
	Set Value (Upper)	Set Value (Lower)	
OP MENU	NEARLIFE STATUS	ENABLE DISABLE	Sets whether to display the warning message if the life of IDs, fuser units or belt units is near end.
	USAGE MENU	ENABLE DISABLE	Sets ENABLE/ DISABLE of the duration menu.
CONFIG MENU	NEARLIFE STATUS	ENABLE DISABLE	Sets whether to display the warning message if the life of IDs, the fuser unit, or the belt unit is near end.
	NEARLIFE LED	ENABLE DISABLE	Sets whether to turn on the LED lamp when toner is low or the duration of drums fuser units or belts is near end. The warning message is displayed.
	PEAK POW CONTROL	ENABLE DISABLE	Sets ENABLE/ DISABLE of the LOW PEAK CONTROL.
FILE SYS MAINTE1	FLASH INITIALIZE	EXECUTE	Initializes the flash memory. **DO NOT USE.**
FILE SYS MAINTE2	INITIAL LOCK	YES NO	Sets whether to perform initialization of internal hard disk and flash memory.
LANGUA-GE MENU	LANG INITIALIZE	EXECUTE	Executes this menu when a language file cannot be rewritten, and the printer does not start normally. After that, the file should be rewritten. When executing this function, the display of the operation panel becomes English, therefore, basically, this should not be used.
CHANGE_ PASS-WORD	NEW PASSWORD	**********(12)	Sets a new password to enter the administrator menu. Sets numbers or lower-case alphabets of 6 digits to 12 digits.
	VERIFY PASSWORD	**********(12)	Enters the password specified in NEW PASSWORD for check again.

Note! FILE SYS MAINTE1 is not displayed in the administrator menu with the factory default settings. It is displayed by changing the default of "FILE SYS MAINTE2" and "INITIAL LOCK" to "NO".

6. CLEANING

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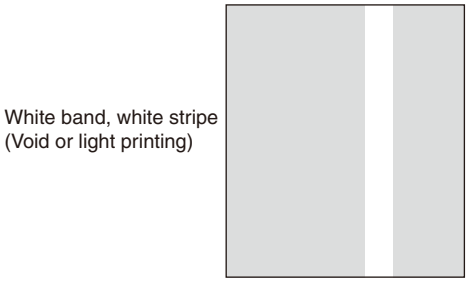
6.1 Cleaning

Clean the interior and outside of the printer, as needed, using a waste cloth and small vacuum cleaner (hand cleaner).

Note! Be careful not to touch the image drum terminals, LED lens array and LED head connectors.

6.2 Cleaning the LED lens array

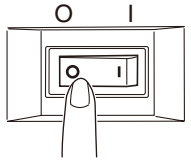
If a vertical white band or white stripe (partial print, light print) is observed in the print face, clean the LED lens array.



Cleaning the LED head

Execute this cleaning if an output shows a light fuzzy print or white stripes, or characters are blurred.

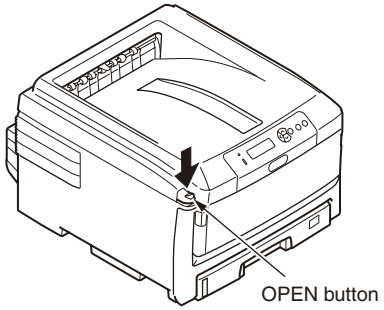
(1) Turn OFF the power of the printer.



(2) Open the top cover by pressing the OPEN button.

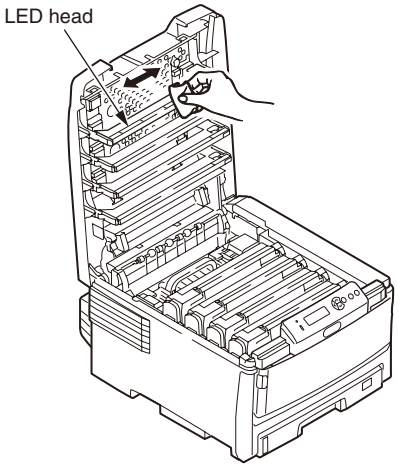
⚠Caution	Personal injuries may occur.	

The fuser unit is extremely hot. Do not touch it.

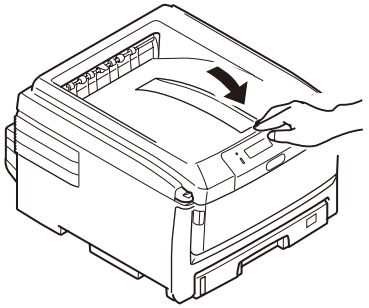


(3) Wipe lightly the four lens surfaces of the LED head with a soft tissue paper.

Note! Do not use methyl alcohol, paint thinner or any other solvent, since they damage the LED head.



(4) Close the top cover.



6.3 Cleaning of pickup rollers

If vertical stripes are observed in the print face, clean the pickup rollers.

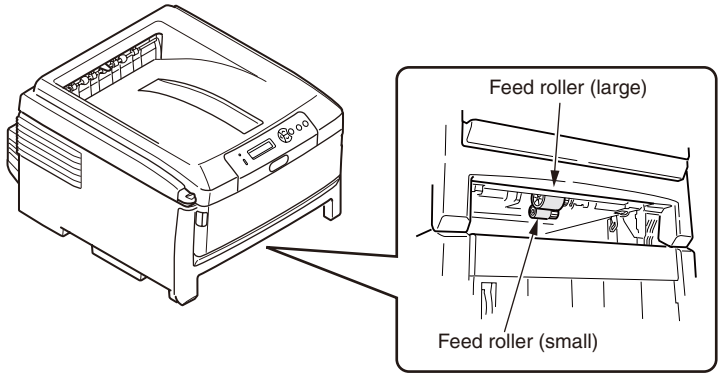
Note! For cleaning, use a soft piece of cloth to avoid scratching the roller surface.

Cleaning the fed Rollers and PAD

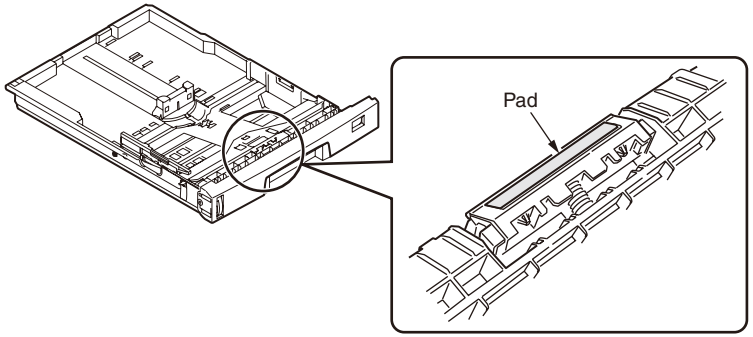
Execute this cleaning if [391 Paper Jam] is issued frequently.

(1) Draw out the paper cassette.

(2) Wipe the feed rollers (large) and feed rollers (small) using a piece of cloth impregnated with water and squeezed hard.



(3) Wipe the pad of the paper cassette using a piece of cloth impregnated with water and squeezed hard.



Note! • Clean the Second Tray (optional) in the same manner, if [392 Paper Jam] recurs frequently.

• Clean the feed rollers of the multi-purpose tray in the same manner, if [390: Check MP Tray] is issued frequently.

7. TROUBLESHOOTING PROCEDURES

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7.1 Precautions prior to repair

(1) Confirm the basic check items indicated in the User's Manual.
(2) Through hearing from the user, obtain information, as far in detail as possible, on the situation concerning the fault.
(3) Inspect the printer in a condition close to the actual situation in which the fault occurred.

7.2 Items to be checked prior to taking action on abnormal images

(1) Check to see if the printer is operated in an adequate environment.
(2) Check to see if the consumables (toner, drum cartridges) are replaced properly.
(3) Check to see if the right paper is used. See the paper specifications.
(4) Check to see if the drum cartridges are installed properly.

7.3 Precautions when taking action on abnormal images

(1) Do not bring your hand or any object in contact with the surface of the OPC drum.
(2) Do not expose the OPC drum to direct sun.
(3) Do not touch the fuser unit, which can be very hot.
(4) Do not expose the image drums to light for over five minutes at the room temperature.

7.4 Preparations for troubleshooting

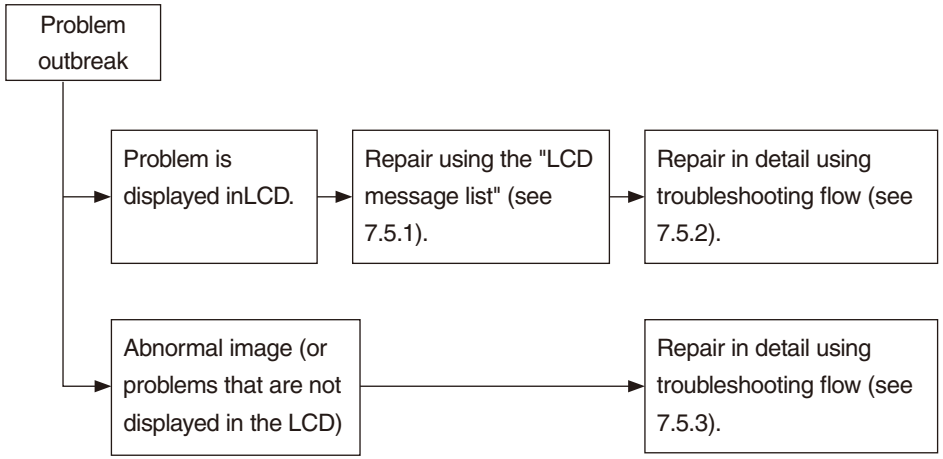
(1) Indications on the operator panel

A fault status of this printer is displayed in the LCD (liquid-crystal display) of the operator panel.

Conduct fault repair properly in accordance with the message displayed in the LCD.

7.5 Troubleshooting method

If a trouble occurs in the printer, search for it by the following procedure.


Problem outbreak
Problem is displayed inLCD.
Repair using the "LCD message list" (see 7.5.1).
Repair in detail using troubleshooting flow (see 7.5.2).
Abnormal image (or problems that are not displayed in the LCD)
Repair in detail using troubleshooting flow (see 7.5.3).

7.5.1 LCD Message list

Initializing

LCD □ means no display in upper line.	Ready LED	Attention LED	Description
PLEASE WAIT	Off	Off	Indicates until CU program is developed as RAM.
INITIALIZING	Off	Off	Indicates that the controller side is initializing.
MENU RESETTING	Off	Off	Indicates that EEPROM of the controller side is being reset. The condition that EEPROM is reset includes the followings. • Changes of CU ROM (when disagreement of CU F/W version is detected) • Changes of destination channel • Compulsive initialization of EEPROM (System maintenance menu) • OEM set of PJL command
RAM CHECK **********	Off	Off	RAM checking. The rate of checked capacity to the total capacity is displayed on the 2nd line.
WAIT A MOMENT NETWORK INITIAL	Off	Off	The network is in initializing.
FLASH CHECK	Off	Off	Displays that the content of Flash memory is being checked. It is displayed it when Resident/Option Flash memory not fomented are detected, or "MAINTENANCE MENU" - "FLASH FORMAT" of a system maintenance menu is performed. The function mentioned above is secret to users. Therefore, this status does not occur in a user environment.

LCD □ means no display in upper line.	Ready LED	Attention LED	Description
FLASH FORMAT	Off	Off	Displays that Flash memory is being formatted. It is displayed it when Resident/Option Flash memory not fomented are detected, or "MAINTENANCE MENU" - "FLASH FORMAT" of a system maintenance menu is performed. The function mentioned above is secret to users. Therefore, this status does not occur in a user environment.
PROGRAM UPDATE MODE	Off	Off	Displays that a printer is a special mode to conduct the update of the NIC program (Controller firmware). This mode starts by turning on power with pressing Online switch.
WAIT A MOMENT DATA RECEIVE	Off	Blink	Displays that the NIC program data to update is being received.
WAIT A MOMENT DATA RECEIVED OK	Off	Off	Displays that the NIC program data to update has been received.
CHECK DATA REC DATA ERROR <%DLCODE%>	Off	On	Displays that an error takes place while a program data to update is being received. %DLCODE% 1: Size Error 2: Check SUM Error 3: Printer Model No. Error 4: Module I/F Version Error 5: FAT Version Error
WAIT A MOMENT DATA WRITING	Off	Blink	Displays that the NIC program data to update is being written.
POWER OFF/ON DATA WRITTEN OK	Off	Off	Displays that the NIC program data to update has been written.

LCD □ means no display in upper line.	Ready LED	Attention LED	Description
CHECK DATA DATA WRITE ERROR <%DLCODE%>	Off	On	Displays that an error takes place while the NIC program data to update is being written. %DLCODE% 1: Memory alloc Error 2: Download File Error 3: Device Free space acquirement Error 4: Device Free area Shortage Error 5: File Write Error 6: CU-F/W Mismatch Error
LOADER VERSION XX·XX	Off	Off	It is shown that PU firmware has booted in Loader mode. This status may occur also in a user environment. When it occurs, the maintenance by a maintenance member is required (equivalent to S/C).
COMMUNICATION ERROR	Off	Off	Displays that communication to PU firmware failed. This status may occur also in a user environment. When it occurs, the maintenance by a maintenance member is required (equivalent to S/C).
STATUS MODE	Off	Off	Displays that normal Online mode starts. Data (Job) from an external portion is processed even though an error takes place after Online (ready) state once this mode starts. Displays Error or Warning on a panel. If a power supply is turned on pressing a <Enter>+<Back>+<Menu > switch, it will enter into this mode. This function is secret to users. Therefore, this status does not occur in a user environment.

Normal

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
ONLINE	On	Off	Shows on-line status.	–
OFFLINE	Off	Off	Shows off-line status. * Ready LED in off-line is always assumed to be Off.	To print from PC, press the ONLINE key to be online.
C M Y K ▮▮▮▮	On	Off	Indicates the remaining amount of toner. (When there is no indication on the second line in ONLINE.)	–
FILE ACCESSING	Varies	Varies	The status showing FILE SYSTEM (HDD/FLASH) is being accessed.	–
DATA ARRIVE	Varies	Varies	Data receiving, process not started yet. Displayed mainly during PJL process without text print data or during job spooling.	–
PROCESSING	Blink	Varies	Data receiving or output processing.	–
DATA	Varies	Varies	Un-printed data remains in Buffer. Waiting for data to follow.	When the printer stops under the condition where DATA is being displayed, press the ONLINE key to print the data forcibly or press the CANCEL key to delete data.
PRINTING	Varies	Varies	A printer is printing.	–
PRINT DEMO PAGE	Varies	Varies	Printing Demo Pages	–
PRINT MENU MAP	Varies	Varies	Printing Menu Maps	–
PRINT NETWORK CONFIG	Varies	Varies	It is shown that a network setup is printing. If chosen by menu "INFORMATION MENU" - "NETWORK" , printing of a network setup will be started.	–
□ COLLATE COPY iii/jjj	Varies	Varies	Collate printing. iii: The number of copy in printing. jjj: the total number of printing. When the total number of printing is 1, it is a normal printing display.	–
□ COPY kkk/lll	Varies	Varies	Copy printing. kkk: The number of pages in printing. lll: The total number of printing. When the number of copy is 1, it is a normal printing display.	–
CANCELING JOB	Blink	Varies	Indicates that job cancellation has been instructed and data is being ignored until the job completion.	–
CANCELING JOB (JAM)	Blink	Varies	Indicates if JAM occurs when Jam Recover is OFF, that job cancellation has been instructed and data is being ignored until the job completion.	–
CANCELING JOB	Blink	Varies	Indicates a job being cancelled due to no print permit. (Related to JobAccount) 1. A job received from a user who is denied printing. 2. A color job received from a user who is denied color printing.	–
CANCELING JOB (BUFFER FULL)	Blink	Varies	Indicates that a job is being cancelled because the printer area where the logs are stored has been used up and also "Cancel job" is specified as an operation at the time of Log Full. (Related to JobAccount)	–

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ PREPARING RINTER	Varies	Varies	Checking toner cartridges.	–
□ ADJUSTING TEMP.	Varies	Varies	Shows cooling down status. It is cautious of a period following "Adjusting Temp"	–
□ ADJUSTING TEMP.	Varies	Varies	Warming up.	–
□ OPTIMIZING TEMP	Varies	Varies	Indicates that printing has been suspended for a while due to high temperature of the drum, or the printer is in a wait state to cope with heat at the time of switching narrow paper to wide paper.	–
□ POWER SAVE	Varies	Varies	A printer is in power save mode. Displayed in a combination of other message in the first line. LCD back light extincts in the energy saving mode and blinks after that mode. If the power is on during the energy saving mode, it lights up and extincts after 30 seconds. However, the energy saming mode remains. Also, it lights up in the priority 365 in shut down process.	–
□ ADJUSTING COLOR	Varies	Varies	Executing Auto Color Adjusting	–
□ ADJUSTING DENSITY	Varies	Varies	Executing Auto Density Adjustment. Status code 10988 corresponds to density reading), thereto 10994 corresponds to density adjusting.	–
□ PU DOWNLOADING	Varies	Varies	Downloading PU F/W (This is not user-level error) This display is an instant so that you ca not see. The process for writing is displayed in PU. This function is secret to users. Therefore, this status does not occur in a user environment.	–

Warning

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ ORDER %COLOR% TONER	Varies	On (Blink) (Off)	Toner amount is low. Displayed in a combination of other message in the first line. In case of MENU "SYS CONFIG MENU" - "LOW TONER=STOP", ATTENTION LED blinks and the printer shifts to OFF Line. When an ONLINE switch is pushed, or when arbitrary errors occur and the error is canceled, an off-line state is canceled, and printing is continued until it is set to Toner Empty. Arbitrary errors are errors of Priority 301-361. "TONER LOW" status occurs when the power is on, the LED of ATTENTION in a case of MENU "SYS CONFIG MENU" - "LOW TONER=STOP is blinked and go back to the off line after the initializing process. It is possible to operate untill "TONER EMPTY" by pressing "ONLINE switch". Moreover, when set as ADMIN MENE "CONFIG MENU" - "NearLifeLED = Disable", Attention LED is switched off. %COLOR% Y M C K	–

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ %COLOR% WASTE TONER FULL. REPLACE TONER	Varies	On	This warning is displayed at Cover Open/Close or Power OFF/ON after a waste-toner full error (Priority: 321.8) occurs. (Not occur for Black.) Displayed in a combination of other message in the first line. As long as this warning is being displayed, a waste toner full error occurs , the printer shifts to Offline and stops each time it has printed about 50 copies. %COLOR% M C	Replace a toner cartridge with color displayed.
□ NON OEM %COLOR% TONER	Varies	On	It shows the toner cartridge of authorized 3rd party. (RFID Licensed to 3rd party) %COLOR% Y M C K	Recommend customers to use the OKI genuine products.
□ %COLOR% TONER REGIONAL MISMATCH	Varies	On	The Region ID of toner cartridge is not proper to the distribution channel. %COLOR% Y M C K	Recommend customers to use the OKI genuine product

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ %COLOR% TONER NOT DETECTED	Varies	On	Not compatible for RF ID chip of the toner cartridges (not genuine) %COLOR% Y M C K	Tell customers that Failures from the non-genuine products are not on repairs without charge, and recommend customers to use the OKI genuine product.
□ ORDER %COLOR% DRUM	Varies	On (Off)	The life of the drum (warning). Displayed in a combination of other message in the first line. The printer stops at the point when it reaches the drum life (Shifts to error, OFF-LINE.) Moreover, when set as ADMIN MENU "CONFIG MENU" - "Near Life LED = Disable ", Attention LED is switched off. Y M C K	–
□ ORDER FUSER	Varies	On (Off)	Notifies the fuser unit is near its life. Moreover, when set as ADMIN MENU "CONFIG MENU" - "Near Life LED = Disable ", Attention LED is switched off.	–
□ ORDER BELT	Varies	On (Off)	Notifies the belt unit is near its life. This is a warning; thus, printing will not stop. Moreover, when set as ADMIN MENU "CONFIG MENU" - "Near Life LED = Disable ", Attention LED is switched off.	–

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ FUSER LIFE	Varies	On	Notifies the life of the fuser unit (warning). Displayed in a combination of other message in the first line. Warning only (No Life error). This appears when the cover was opened and closed just after the fuser life error occurred. Also this occurred instead of the fuser life error, if the "FUSER LIFE PRINT CONTINUE" setting was 'ON'.	Replace new fuser.
□ BELT LIFE	Varies	On	Notifies the life of the belt unit (warning). Displayed in a combination of other message in the first line. Warning only (No Life error). This appears when the cover was opened and closed just after the belt life error occurred. Also this occurred instead of the belt life error, if the "BELT LIFE PRINT CONTINUE" setting was 'ON'.	Replace new belt unit.
□ %COLOR% TONER EMPTY	Varies	On	Notifies the toner is empty. This is a warning only. This appears when the cover was opened and closed just after the toner empty error occurred. Also this occurred instead of the toner empty error, if the "TONER EMPTY PRINT CONTINUE" setting was 'ON'. Y M C K	Replace new toner cartridge.

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ %COLOR% TONER NOT INSTALLED	Varies	On	Notifies the toner cartridge is not installed. This is a warning only. %COLOR% Y M C K	Install the toner cartridge. Be careful that the toner cartridge supplied with the product cannot be used if the toner cartridge of other supply is used.
□ %COLOR% DRUM LIFE	Varies	On	Notifies the life of the drum. This is a warning only. This appears when the cover was opened and closed just after the drum life error occurred. Also this occurred instead of the drum life error, if the "DRUM LIFE PRINT CONTINUE" setting was 'ON'. %COLOR% Y M C K	Replace the image drum in a displayed color.
□ BELT REFLEX ERROR	Varies	On	Belt Reflex Check Error. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–
□ DENSITY SHUTTER ERROR2	Varies	Varies	Density Adjustment Shutter Error 2. Error that does not occur at user level. Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ DENSITY SHUTTER ERROR1	Varies	Varies	Density Adjustment Shutter Error 1. Error that does not occur at user level. Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–
□ DENSITY COLOR CALIBRATION ERROR	Varies	Varies	Density Adjustment Color Calibration Error. Error that does not occur at user level. Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–
□ DENSITY COLOR SENSOR ERROR	Varies	Varies	Density Adjustment Color Sensor Error. Error that does not occur at user level. Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–
□ DENSITY BLACK CALIBRATION ERROR	Varies	Varies	Density Adjustment Black Calibration Error. Error that does not occur at user level. Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–
□ DENSITY BLACK SENSOR ERROR	Varies	Varies	Density Adjustment Black Sensor Error. Error that does not occur at user level. Displayed only in FactoryMode. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–
□ %COLOR% IMAGE DRUM SMEAR ERROR	Varies	Varies	Density Adjustment ID ERROR 2; smear due to ID failure. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. %COLOR% Y M C K	–
□ %COLOR% LOW DENSITY ERROR	Varies	On	Density Adjustment ID ERROR; LED out of focus is assumed. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. Y M C K	–
□ SENSOR CALIBRATION ERROR	Varies	On	When output of color registration sensor is below reference value. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment.	–

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ REGISTRATION ERROR n	Varies	On	When a color registration error is detected with coarse adjustment, or with the main-scan line adjustment. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. n 2 = Yellow 3 = Magenta 4 = Cyan 5 =	–
□ REGISTRATION SENSOR ERROR n	Varies	On	When a color registration error is detected with the fine control of registration adjustment, or with the sub-scan line adjustment. PU firmware does not notify this warning to CU firmware at the time of Shipping Mode. Therefore, this status does not occur in a user environment. n 2 = Yellow 3 = Magenta 4 = Cyan 5 =	–
□ %TRAY% EMPTY	Varies	On	%TRAY%: The tray is empty. Treated as Warning until printing to the empty tray is designated. In this case, Leisus I/F : corresponding bits of both LFTERR and LFTERR2 should be '0'. %TRAY% Tray1 Tray2 Tray3 MP tray	Load paper in a displayed tray.

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
PRESS ONLINE SW COLLATE ERROR	Varies	On	Indicates that memory is full with copy data. It is displayed until the online button is pressed.	Reduce the number of pages to be printed at a time.
PRESS ONLINE SW COLOR LIMIT CANCEL PRINTING	Varies	On	Indicates when a job is canceled without permission for color printing. (related to Job Account) It is displayed until the online button is pressed.	Ask the administrator for the job account.
PRESS ONLINE SW PRINT LIMIT	Varies	On	Informs the user that a job is canceled without print permission. (related to Job Account) It is displayed until the online button is pressed.	• Set the user ID of the job account in the printer driver. • If the user ID has been set in the driver, confirm the user ID and its setting with the job account administrator.
PRESS ONLINE SW LOG BUFFER FULL CANCEL PRINTING	Varies	On	Informs the user that a job is canceled due to Log Buffer Full. (related to Job Account) It is displayed until the online button is pressed.	Execute [Obtain Logs Immediately] on the server PC of print job accounting.

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
□ DISK OPERATION ERROR %FS_ERR%	Varies	On	Indicates file system errors other than the statuses related to the above file system. Processing without file system is available. %FS_ERR% =0 ...GENERAL ERROR =1 ...VOLUME NOT AVAILABLE =3...FILE NOT FOUND =4 ...NO FREE FILE DESCRIPTORS =5 ...INVALID NUMBER OF BYTES =6 ...FILE ALREADY EXISTS =7 ...ILLEGAL NAME =8 ...CANT DEL ROOT- =9 ...NOT FILE =10 ...NOT DIRECTORY =11 ...NOT SAME VOLUME =12 ...READ ONLY =13 ...ROOT DIR FULL =14 ...DIR NOT EMPTY =15 ...BAD DISK =16 ...NO LABL =17 ...INVALID PARAMETER =18 ...NO CONTIG SPACE =19 ...CANTCHANGE ROOT =20 ...FD OBSOLETE =21 ...DELETED =22 ...NO BLOCK DEVICE =23 ...BAD SEEK =24 ...INTERNAL ERROR =25...WRITE ONLY	
PRESS ONLINE SW INVALID DATA or TIMEOUT	Varies	Varies	Encourages the user to delete the warning display by pressing the online button since invalid data is received. It is displayed when un-supported PDL command is received.	Press ONLINE

LCD □ means no display in upper line.	Ready LED	Attention LED	Description	Handling
LOAD %MEDIA_SIZE% In MP TRAY and PRESS ONLINE SW.	On	Off	Indicates that the manual feed printing is requested. Encourages the user to load the paper size indicated by %MEDIA_SIZE% paper size unit at Custom follows the displayed unit specification of the MP tray if there is no specification from the driver. If a unit is specified from the driver, the unit specified by the driver is displayed. Paper size at Custom is displayed as follows: “ <width> x <length> <unit>” Ex) 210 x 297mm 8.5 x 11.0 inch	Press ONLINE * The data will be deleted unless the ON-LINE button is pressed within the time set by [Manual Timeout].

When the printer detects an irrecoverable error, it displays a service call error in the LCD like the one given below:

SERVICE CALL

nnn: error

Note! "nnn" is an error code.

When a service call error is issued, an error code is displayed in the lower line of the LCD, accompanied by the relevant error information. Be sure to make a note of this error information (numeric values representing an address, etc.) and communicate it to the related departments, since such information will be required for the subsequent trouble analysis/solution. The error codes and their meanings, as well as the related remedial methods, are given in Table 7-1-1 and 7-1-2.

Table 7-1-1 Operator Alarm

LCD	Online lamp	Check Lamp	Description	Code Nnn
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% MEDIA MISMATCH	Off	Blink	The media type in the tray and the print data do not match. Encourages the user to load the paper the tray. (tttttt:TrayName, mmmmmm:PaperName, pppppp: MediaTypeName) ~~Error 661 : Tray1~~ ~~Error 662 : Ttay2~~ Error 461 : Tray1 Error 462 : Ttay2 Error 463 : Ttay3 The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. Paper size displays in Custom mode: "<width>x<length><unit>" ex.) 210x297MM 8.5x11.0INCH As a user pressed ONLINE key, the printer could ignore this error at the just printing job.	Error 461 462 463
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% MEDIA MISMATCH	Off	Blink	The media type in the tray and the print data do not match. Encourages the user to load the paper the tray. ~~Error 660 : Multi-purpose tray~~ Error 460 : Multi-purpose tray The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. ex.) 210x297MM 8.5x11.0INCH As a user pressed ONLINE key, the printer could ignore this error at the just printing job.	Error 460
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% SIZE MISMATCH	Off	Blink	The size of paper or media type in the tray does not match the print data. Encourages the user to load the paper the tray. Error 461 : Tray1 Error 462 : Ttay2 Error 463 : Ttay3 The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. ex.) 210x297MM 8.5x11.0INCH As a user pressed ONLINE key, the printer could ignore this error at the just printing job.	Error 461 462 463

LCD	Online lamp	Check Lamp	Description	Code Nnn
LOAD %MEDIA_SIZE%/ %MEDIA_TYPE% AND PRESS ONLINE SWITCH %ERRCODE%:%TRAY% SIZE MISMATCH λ	Off	Blink	The size of paper or media type in the tray does not match the print data. Load paper in tray (It takes a while until the status disappears after you have closed the tray and the lever lifted.) Error 460 : MPTray The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display. ex.) 210x297MM 8.5x11.0INCH As a user pressed ONLINE key, the printer could ignore this error at the just printing job.	Error 460
DOWNLOAD MESSAGE PROCESSING	Varies	Varies	Indicates that message data to be updated is being processed.	Error (ONLINE)
DOWNLOAD MESSAGE WRITING	Varies	Varies	Indicates that message data to be updated is being written.	Error (ONLINE)
DOWNLOAD MESSAGE SUCCESS	Varies	Varies	Indicates that message data to be updated has been written successfully.	Error (ONLINE)
DOWNLOAD MESSAGE FAILED %CODE%	Varies	Varies	Indicates that writing of message data to be uploaded has been failed. %CODE% is a decimal value (one digit) and represents the cause of failure in writing. = 1 ... FAIL: Other errors = 2 ... DATA_ERROR: Hash check error in data reading/writing, or abnormal FLASH = 3 ... OVERFLOW: Downloading failure due to FLASH memory full at starting or during writing in a language file = 4 ... MEMORYFULL: Memory reservation failure = 5 ... UNSUPPORTED_DATA: Downloading data unsupported on the printer	Error (ONLINE)

LCD	Online lamp	Check Lamp	Description	Code Nnn
NETWORK CONFIG WRITING	Varies	Varies	This appears during the NIC configuration data is storing into the flash memory, as the setting was changed.	Error (ONLINE)
WAIT A MOMENT NETWORK INITIAL	Varies	Varies	This appears when the NIC initialization occurs, as the setting was changed.	Error (ONLINE)
LOAD %MEDIA_SIZE% %ERRCODE%:%TRAY% EMPTY	Off	Blink	Printing request is issued to an empty tray. Encourages the user to load the paper the tray. Error 491 : Tray1 Error 492 : Tray2 Error 493 : Tray3 The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display.	Error 491 492 493
LOAD %MEDIA_SIZE% AND PRESS ONLINE SWITCH %ERRCODE%:MP TRAY EMPTY	Off	Blink	Printing request is issued to an empty MPTray. If a user pushes the ONLINE button before timeout, the printer perform also re-feeding,. Error 490 : MPTray The unit of paper size in Custom: The unit specified for MPTray (menu setting) is used if no unit is specified by the driver. When the driver specifies a unit, the unit is used for display.	Error 490
INSTALL PAPER CASSETTE %ERRCODE%:TRAY1 OPEN	Off	Blink	Indicates removal of the paper cassette of Tray 1 or Tray 2 that is a paper path when attempting to print from Tray 2 or Tray 3. Error 440: Tray 1 Error 441: Tray 2	Error 440 441
INSTALL PAPER CASSETTE %ERRCODE%:%TRAY% MISSING	Off	Blink	Indicates that paper feed is unavailable in attempting to print from Tray Error 430: Tray 1 Error 431: Tray 2 Error 432: Tray 3	Error 430 431 432

LCD	Online lamp	Check Lamp	Description	Code Nnn
INSTALL MEMORY %ERRCODE%: MEMORY OVERFLOW	Off	Blink	Indicates the memory overflow due the following reasons. The printer continues by pressing the online button. Install an expanded RAM or reduce data. The reason is mostly as follows. - too much data per page.	Error 420
REPLACE TONER %ERRCODE%: %COLOR% WASTE TONER FULL	Off	Blink	Indicates that a waste toner box represented by %COLOR% has become full and needs to be replaced. Error 415 : M Error 416 : C (Does not occur for K.) Warning status takes effect at Cover Open/ Close and printing of about 50 copies becomes available.	Error 415 416
REPLACE TONER %ERRCODE%: %COLOR% TONER EMPTY	Off	Blink	Toner ends. Warning status takes effect at Cover Open/ Close. Error 410 : Y Error 411 : M Error 412 : C Error 413 : K	Error 410 411 412 413
REPLACE TONER %ERRCODE%: %COLOR% TONER REGIONAL MISMATCH	Off	Blink	The signature ID of toner cartridge is not proper to the distribution channel. It recovers by replacing with a proper toner cartridge for the device. Error 554 : Y Error 555 : M Error 556 : C Error 557 : K	Error 554 555 556 557
REPLACE TONER %ERRCODE%: INCOMPATIBLE %COLOR% TONER	Off	Blink	The signature ID of toner cartridge is not proper to the distribution channel. It recovers by replacing with a proper toner cartridge for the device Error 614 : Y Error 615 : M Error 616 : C Error 617 : K	Error 614 615 616 617
REPLACE TONER %ERRCODE%: INCOMPATIBLE %COLOR% TONER	Off	Blink	The signature ID of toner cartridge is not proper to the distribution channel. It recovers by replacing with a proper toner cartridge for the device Error 620 : Y Error 621 : M Error 622 : C Error 623 : K	Error 620 621 622 623
GENUINE TONER IS RECOMMENDED %ERRCODE%:NON GENUINE %COLOR% TONER	Off	Blink	The signature ID of toner cartridge is not proper to the distribution channel. It recovers by replacing with a proper toner cartridge for the device Error 550 : Y Error 551 : M Error 552 : C Error 553 : K	Error 550 551 552 553
INSTALL TONER %ERRCODE%: %COLOR% TONER MISSING	Off	Blink	The toner cartridge is not installed. Error 610 : Y Error 611 : M Error 612 : C Error 613 : K Engine detects by opening and closing the cover, and if the toner cartridge is not replaced, the printer transfers to Warning, and up to 50 pages can be printed.	Error 610 611 612 613
CHECK TONER CARTRIDGE %ERRCODE%: %COLOR% TONER SENSOR ERROR	Off	Blink	Something is wrong with the toner sensor. Error 540 : Y Error 541 : M Error 542 : C Error 543 : K	Error 540 541 542 543
OPEN FRONT COVER %ERRCODE%:PAPER SIZE ERROR	Off	Blink	Inappropriate size paper was fed from a tray. Check the paper in the tray or check for Multiplefeed. Open and close the cover to perform recovery printing, and continue. Recovery printing is performed by opening and closing the cover and printing is continued.	Error 400

LCD	Online lamp	Check Lamp	Description	Code Nnn
Open the top cover. %ERRCODE%:PAPER MULTI FEED	Off	Blink	Warns that inappropriate long paper has been fed from the tray. Check whether Multi-feed has happened. Recovery Print takes place at Cover Open/ Close, allowing the operation to continue.	Error 401
CHECK MP TRAY %ERRCODE%:PAPER JAM	Off	Blink	Paper jam occurred during paper feeding from tray. Error 390 : MP Tray	Error 390
OPEN FRONT COVER %ERRCODE%:PAPER JAM	Off	Blink	Paper jam occurred during paper feeding from tray. Error 391 : Tray1 Error 392 : Tray2 Error 393 : Tray3	Error 391 392 393
OPEN FRONT COVER %ERRCODE%:PAPER JAM	Off	Blink	Jam has occurred in paper path. Error 380 : Feed	Error 380
OPEN TOP COVER %ERRCODE%:PAPER JAM	Off	Blink	Jam has occurred in paper path. Error 381 : Transport Error 382 : Exit Error 383 : Duplex Entry Error 385 : Around Fuser Unit Error 389 : Printing Page Lost	Error 381 382 383 385 389
OPEN REAR COVER %ERRCODE%: PAPER JAM	Off	Blink	Jam has occurred nearby DUPLEX unit. Error 370 : Duplex Reversal Error 371 : Duplex Input Error 373 : Multifeed into Duplex	Error 370 371 373
OPEN FRONT COVER %ERRCODE%:PAPER JAM	Off	Blink	Jam has occurred nearby DUPLEX unit. Error 372 : Misfeed from Duplex	Error 372
INSTALL DUPLEX UNIT %ERRCODE%: DUPLEX UNIT OPEN	Off	Blink	Duplex unit is open (removed). When this error is detected, printing stops.	Error 360
REPLACE IMAGE DRUM %ERRCODE%: %COLOR% DRUM LIFE	Off	Blink	The life of the image drum (Alarm) Warning status takes effect at Cover Open/ Close. Error 350 : Y Error 351 : M Error 352 : C Error 353 : K	Error 350 351 352 353

LCD	Online lamp	Check Lamp	Description	Code Nnn
REPLACE IMAGE DRUM %ERRCODE%: %COLOR% DRUM LIFE	Off	Blink	The toner empty error occurs after the image drum reached its life. This is displayed until a user exchanges the image drum. Error 560 : Y Error 561 : M Error 562 : C Error 563 : K	Error 560 561 562 563
REPLACE FUSER %ERRCODE%: FUSER LIFE	Off	Blink	Notifies the fuser has reached its life. This is the error displayed based on the counter to indicate that the fuser has reached its life, and printing will stop. Warning status takes effect at Cover Open/ Close.	Error 354
REPLACE BELT %ERRCODE%: BELT LIFE	Off	Blink	Notifies the transfer belt has reached its life. This is the error displayed based on the counter to indicate that the belt has reached its life, and printing will stop. Warning status takes effect at Cover Open/ Close.	Error 355
INSTALL FUSER AGAIN %ERRCODE%: FUSER ERROR	Off	Blink	Some thing wrong occurs when scanning by the release position sensor of the fuser unit. It recovers when normal value is scanned after closing cover. If it does not recover, the fuser unit needs to be replaced.	Error 348
REPLACE BELT %ERRCODE%: BELT LIFE	Off	Blink	Indicates waste toner full. Warning status takes effect only once at Cover Open/ Close, and the error occurs again when about 500 copies have been printed.	Error 356

LCD	Online lamp	Check Lamp	Description	Code Nnn
CHECK TONER CARTRIDGE %ERRCODE%: %COLOR% IMPROPER LOCK LEVER POSITION	Off	Blink	Shows that the toner cartridge lever has not been locked. Error 544 : Y Error 545 : M Error 546 : C Error 547 : K	Error 544 545 546 547
CHECK IMAGE DRUM %ERRCODE%: %COLOR% DRUM ERROR	Off	Blink	The image drum is not correctly installed. Error 340 : Y Error 341 : M Error 342 : C Error 343 : K	Error 340 341 342 343
CHECK FUSER %ERRCODE%: FUSER ERROR	Off	Blink	The fuser unit is not correctly installed. (This error can occur when the printer temperature is below 0 degree C. Turn on the power again after the printer temperature has increased.)	Error 320
CHECK BELT %ERRCODE%: BELT ERROR	Off	Blink	The belt unit is not correctly installed.	Error 330
POWER OFF AND WAIT FOR A WHILE %ERRCODE%: MOTOR OVERHEAT	Off	Blink	Motor Driver ID overheat is detected.	Error 321
CLOSE COVER %ERRCODE%: COVER OPEN	Off	Blink	The cover is open. Error 310 : Top Cover Error 311 : Front Cover	Error 310 311
CLOSE COVER %ERRCODE%: REAR COVER OPEN	Off	Blink	The cover is open. Error 316 : Duplex Unit	Error 316
WAIT A MOMENT DATA RECEIVE	Off	Blink	The printer is receiving the NIC download data.	Error
WAIT A MOMENT DATA RECEIVED OK	Off	Off	The printer finished receiving the NIC download data.	Error

LCD	Online lamp	Check Lamp	Description	Code Nnn
CHECK DATA REC DATA ERROR <%DLCODE%>	Off	On	An error has happened while the printer is receive-processing the download data. %DLCODE% 1: Size error 2: Check-sum error 3: Invalid printer model number 4: Invalid module I/F version 5: Invalid FAT version	Error
WAIT A MOMENT DATA WRITING	Off	Blink	The printer is writing the NIC download data.	Error
POWER OFF/ON DATA WRITTEN OK	Off	Off	The printer finished writing the NIC download data.	Error
CHECK DATA DATA WRITE ERROR <%DLCODE%>	Off	On	An error has happened while the printer is writing the download data. %DLCODE% 1: Memory allocation error 2: Download file error 3: Device allocation error 4: No device space 5: File writing failure 6: CU-F/W mismatch	Error
REBOOTING %CODE%	Off	On	Rebooting of the controller unit. %CODE% is a decimal value (one digit) and represents the reason to reboot. = 0 ... Reboot due to a reason other than the followings. = 1 ... Reboot due to PJLCommand. = 2 ... Reboot in accordance with a menu change. = 3 ... Reboot due to quit operator of PostScript Language. = 4 ... reboot by Network Utility (including Web).	Error
SHUTTING DOWN	Off	Off	It is shown that a printer is shutting down. Shutdown processing is started with which press BACK button 4 seconds or more after the completion of initialization processing of a printer.	Error

LCD	Online lamp	Check Lamp	Description	Code Nnn
SHUTDOWN	Off	Off	Indicates that the printer has completed shutting down.	Error
PLEASE POW OFF SHUTDOWN COMP	Off	Off	It is shown that the printer completed shutdown processing. (The backlight of LCD puts out the light)	Error
POWER OFF AND WAIT FOR A WHILE %ERRCODE%: CONDENSING ERROR	Off	Blink	A dew is formed. (The display is different, however, it is the same as the service call error.) *Fatal Error is not available in national language.	Fatal 126
POWER OFF/ON %ERRCODE%:FATAL ERROR	Off	Blink	A fatal error occurred. For more information, see attached 'Fatal Calls List'. *Fatal Error is not available in national language.	Fatal <nnn>
SERVICE CALL %ERRCODE%:FATAL ERROR	Off	Blink	A fatal error occurred. For more information, see attached 'Fatal Calls List'. *Fatal Error is not available in national language.	Fatal <nnn>
SERVICE CALL %ERRCODE%:FATAL ERROR	Off	Blink	A fatal error occurred. '*' specifies the detailed error cause. *Fatal Error is not available in national language.	Fatal 096 231 128 168 169
POWER OFF/ON %ERRCODE%: FATAL_ERROR nnnnnnnn nnnnnnnn nnnnnnnn	Off	Blink	A fatal error occurred. For more information, see "Service Calls List". 'nnnnnnnn' specifies the detailed error cause. *Fatal Error is not available in national language.	Fatal 002 ~ 005, F0C F0D FFE FFF
POWER OFF/ON %ERRCODE%: DOWNLOAD ERROR	Off	Blink	Downloading Media Table to PU has failed. (Related to CustomMediaType.) *Fatal Error is not available in national language.	Fatal 209

Table 7-1-2 Service Call Error List

Message	Cause	Error Description		Handling
POWER OFF/ON 002: FATAL ERROR 〜 005: FATAL ERROR	CPU Exception	Does error display reappear?	Yes	Power OFF/ON Replace the CU PCB.
SERVICE CALL 020: FATAL ERROR	CU ROM Hash Check Error	Does error display reappear?	Yes	Power OFF/ON Replace CU PCB.
SERVICE CALL 030: FATAL ERROR	CU RAM Check Error	Does error display reappear?	Yes	Power OFF/ON Replace CU PCB.
SERVICE CALL 040: FATAL ERROR	CU EEPROM Error	Does error display reappear?	Yes	Power OFF/ON Replace CU PCB.
SERVICE CALL 041: FATAL ERROR	CU Flash Error Flash ROM Error on the CU board.	Does error display reappear?	Yes	Power OFF/ON Replace CU PCB.
SERVICE CALL 042: FATAL ERROR 〜 043: FATAL ERROR 045: FATAL ERROR	Flash File System Error	Access to the Flash ROM directly mounted on the CU PCB failed.		Power OFF/ON Replace CU PCB.
POWER OFF/ON 072: FATAL ERROR xx	Engine I/F Error I/F error between PU-CU.	Is CU assembly set properly? Is error recovered by replacing CU board?	No Yes No	Set properly. Replace CU PCB. Replace PU PCB.

Message	Cause	Error Description		Handling
POWER OFF/ON 073: FATAL ERROR xxxxxxxx	Video Error. A trouble was detected during image data development. (Illegal data received)	s the CU Assy installed properly?	No Yes	Redo the installation properly. Change the PC for another of higher grade, or execute print again after reducing the resolution. Replace the CU PCB.
		Is the error issued again?	Yes	
				Replace the interface cable. Reinstall the PC printer driver.
POWER OFF/ON 074: FATAL ERROR xxxxxxxx 075: FATAL ERROR xxxxxxxx	Video Error Fault detected when image data is extended.	Is CU assembly set properly?	No Yes	Set properly. Replace CU PCB.
SERVICE CALL 081: FATAL ERROR	Parameter consistency Check error	EEPROM or FLASH has become incapable of reading or writing.		Replace the CU board if the problem remains after cycling the power.
SERVICE CALL 104: FATAL ERROR	Engine EEPROM setting check is OK when power ON. Then detect read/ write error.	Does error reoccur?	Yes	Power OFF/ON Replace PU PCB.
SERVICE CALL 106: FATAL ERROR	Abnormal engine control logic.	Does error reoccur?	Yes	Power OFF/ON Replace PU PCB.
SERVICE CALL 111: FATAL ERROR	Detected different Duplex Unit.	Is different Duplex Unit installed?	No	Install Duplex Unit of this printer.

Message	Cause	Error Description		Handling
SERVICE CALL 112: FATAL ERROR	Detected different 2nd Tray.	Is different 2nd Tray installed?	No	Install 2nd Tray of this printer.
SERVICE CALL 113: FATAL ERROR	Detected different 3rd Tray.	Is different 3rd Tray installed?	No	Install 3rd Tray of this printer.
SERVICE CALL 121: FATAL ERROR	High-voltage power supply I/F error.	Is cable between PU board and high-voltage power unit connected properly?	No Yes	Connect properly. Check improper connections for high voltage.
		Is there no improperly connections?	No	Replace high-voltage power supply.
SERVICE CALL 122: FATAL ERROR	Low-voltage power supply fan error.	Low-voltage power supply temperature error.	No Yes	Check connections for connector of fan. Replace low-voltage power supply.
		Is fan in low-voltage power supply unit operating?	No Yes	Replace fan motor. Replace low-voltage power supply.
SERVICE CALL 123: FATAL ERROR	Abnormal environment humidity /Not Connected humidity sensor.	Does error reoccur?	Yes	Power OFF/ON Replace the operator panel PCB.
SERVICE CALL 124: FATAL ERROR	Abnormal Environment temperature.	Does error reoccur?	Yes	Power OFF/ON Replace the operator panel PCB.
SERVICE CALL 126: FATAL ERROR	Condensation in the printer was detected.	Condensation is likely to occur in printers carried from the outside. Turn on the printer again after it is exposed to room temperature for two hours to half a day. Does the error reoccur?	Yes	Turn on the printer again after it is left alone. Replace the operator panel PCB.

Message	Cause	Error Description		Handling
SERVICE CALL 127: FATAL ERROR	Error detected at the fuser unit cooling fan.	Is fan connector connected properly? Does error reoccur?	No Yes No	Connect properly again. Replace fan motor. Replace PU PCB.
SERVICE CALL 128: FATAL ERROR 05	Error detected at the fuser-end cooling fan.	Is fan connector connected properly? Does error reoccur?	No Yes No	Connect properly again. Replace fan motor. Replace PU PCB.
SERVICE CALL 131: FATAL ERROR 〜 134: FATAL ERROR	LED head fault detected. (131 = Y, 132 = M, 133 = C, 134 = K)	Is LED head properly set? Is the LED head fuse blown out? Does error reoccur?	No Yes Yes No Yes	Install the LED head unit properly. Check the LED head fuse on the CU PCB. Change CU PCB refer 7.5.2 (14). Turn on the power again. Replace the LED head unit. (For fuse changing method, see Subsection 7.6.)
SERVICE CALL 142: FATAL ERROR	Error detected at ID position of Up/Down	Is ID unit set properly? Does error reoccur?	Yes No Yes	Reset ID unit. Turn power ON again. Replace ID Up/ Down sensor.
SERVICE CALL 150: FATAL ERROR 〜 153: FATAL ERROR	ID unit fuse cannot Be disconnected. (150 = Y, 151 = M, 152 = C, 153 = K)	Is ID unit setting proper? Does error reoccur? Does the printer recover from the error when the PU/PRZ board is replaced?	No Yes Yes No	Reset ID unit. Turn power ON again. After check connections of cable between PRT board and PU PCB, replace PRT PCB. Replace PU PCB.

Message	Cause	Error Description		Handling
SERVICE CALL 154: FATAL ERROR	Belt unit fuse cannot be disconnected.	Is belt unit setting proper? Does error reoccur?	No Yes Yes	Reset belt unit. Turn power ON again. Check cable connections and, replace PU PCB.
SERVICE CALL 155: FATAL ERROR	Fuser unit fuse cannot be disconnected.	Is fuser unit set properly? Does error reoccur?	No Yes Yes	After cleaning for fuser connector, reset. Turn power ON again. Check cable connections and replace PU PCB.
SERVICE CALL 160: FATAL ERROR 〜 163: FATAL ERROR	Error detected by toner sensor. (160= Y, 161 = M, 162= C, 163 = K) It does not occur in factory default setting.	Is toner cartridge setting? Is toner lock lever setting? Does error reoccur?	No No Yes	Set toner cartridge. Turn a lock lever of toner to a fixed position. Replace toner sensor or assembly.
SERVICE CALL 167: FATAL ERROR	Thermistor Slope Error	Is an error message indicated? Is the error issued again?	 Yes	Turn on the power again. Leave the printer as is for 30 minutes, and turn on the power again.
SERVICE CALL 168: FATAL ERROR	Compensation Thermistor Error	Is an error message indicated? Is the error issued again?	 Yes	Turn on the power again. Leave the printer as is for 30 minutes, and turn on the power again.

Message	Cause	Error Description		Handling
SERVICE CALL 169: FATAL ERROR	Upper Side Thermistor Error	Is the error issued again?	Yes	Turn on the power again. Leave the printer as is for 30 minutes, and turn on the power again.
SERVICE CALL 170: FATAL ERROR 171: FATAL ERROR	Short circuit in fuser Ther-mistor or open detected.	Does error reoccur?	Yes	Turn power ON again. Replace fuser unit.
SERVICE CALL 172: FATAL ERROR 173: FATAL ERROR	Abnormal temperature detected by fuser Thermistor (high temp or low temp.)	Does error reoccur? Dose error reoccur?	Yes Yes	Turn power ON again. Replace fuser unit. Replace the low-voltage power supply.
SERVICE CALL 174: FATAL ERROR	Short circuit in back up roller Thermistor detected (at high temperature).	Does error reoccur?	Yes	Turn power ON again. Replace fuser unit.
SERVICE CALL 175: FATAL ERROR	Open of back up roller Thermistor detected (at low temperature).	Does error reoccur?	Yes	Turn power ON again. Replace fuser unit.
SERVICE CALL 176: FATAL ERROR 177: FATAL ERROR	Abnormal (high or low) temperature of back up roller Thermistor detected.	Does error reoccur? Dose error reoccur?	Yes Yes	Turn power ON again. Replace fuser unit. Replace the low-voltage power supply.
SERVICE CALL 181: FATAL ERROR 182: FATAL ERROR 183: FATAL ERROR	Option unit I/F error. (181 = Duplex Unit, 182= 2nd Tray 183= 3rd Tray)	Does error reoccur? Dose error reoccur?	Yes Yes	Turn power ON again. Check connection parts of connector, replace option unit.

Message	Cause	Error Description		Handling
POWER OFF/ON 190: FATAL ERROR	System Memory Overflow.	Does error reoccur?	Yes	Turn power ON again.
SERVICE CALL 200: FATAL ERROR 〉 202: FATAL ERROR	PU Firmware Download Error	Error occurered while writing over the PU firmware.		Turn the printer OFF/ON, and retry to download the PU firmware again. (Usually, the procedure (PU firmware download) which isn't done, so this does not occur.)
POWER OFF/ON 209: DOWNLOAD ERROR	Failed to download Custom Media Type table	Failed to download Custom Media Type table		Turn the printer OFF/ON, and retry to download the PU firmware again. (Usually, the procedure (PU firmware download) which isn't done, so this does not occur.)
POWER OFF/ON 203: FATAL ERROR 204: FATAL ERROR 207: FATAL ERROR 208: FATAL ERROR 213: FATAL ERROR 214: FATAL ERROR F0C: FATAL ERROR FFF: FATAL ERROR	An error was detected of the CU program. (203~214 does not occur in usual operating.)	Unauthorized processing is executed in the CU program.		After turn power OFF, check connections between CU board and PU board. Then turn power ON again.
SERVICE CALL 230:ERROR	RFID Reader not Installed	RFID read device error Is the error issued again?	Yes Yes	Check the connection of the RFID R/W board. Replace the RFID R/W board. Replace the S2V PCB.

Message	Cause	Error Description		Handling
SERVICE CALL 231: FATAL ERROR	RFID Reader I/F Error	An interface error was detected with the RFID reader device. 01: communication error between the RFID reader and the engine PCB. 02: the transceiver circuit error of the RFID reader. 03: communication error between the RFID reader and the Tag chip. 04: the RFID Tag detection error (more than 4 chips).		01: Same as Error 230 02: Replace RFID R/W board. 03: Check the antenna cable connection. 04: Check to see if the quantity of RFID Tags is correct.
POWER OFF/ON 901: FATAL ERROR 〜 904: FATAL ERROR	Belt temperature abnormality 901: Short 902: Open 930: high temperature 904: Low temperature	Is the cable of the high voltage board from the Belt Thermistor correctly connected? Does error reoccur?	No Yes No	Connect cable set properly again. Turn power ON again. Replace belt thermistor.
POWER OFF/ON 918 : FATAL ERROR	Duplex FAN Alarm Dtekution	FAN error inside the Duplex. Is the error issued again when the power is turned on again?	 Yes Yes	Check to see if the Duplex is properly installed. Check to see if the FAN is properly connected. Replace the FAN.
POWER OFF/ON 923 : FATAL ERROR	Black Image Drum Lock Error	The black image drum (K-ID) does not rotate properly. Is the error message issued again when the power is turned on? Is the error message issued again when the power is turned on?	 Yes Yes	Check to see if the K-ID is properly installed. Replace the K-ID. Replace the K-ID motor.
POWER OFF/ON 928 : FATAL ERROR	Fuser Motor Lock Error	The fuser unit does not rotate properly. Does the error reoccur after power cycling? Does error reoccur?	 Yes Yes	Check to see if the fuser unit is properly installed. Replace the fuser unit. Replace the fuser motor.

Message	Cause	Error Description		Handling
SERVICE CALL 980 : FATAL ERROR	Error by media clinging to the fuser	Media has clung to the fuser.		Power OFF Replace the fuser unit.
SERVICE CALL 983 : FATAL ERROR	Double toner-cartridge detected	Multiple toner cartridges with the same color have been detected.		Replace with a correct toner cartridge.
SERVICE CALL 984: FATAL ERROR 〜 987: FATAL ERROR	oner cartridge mismatch 984: K 985: Y 986: M 987: C	Toner cartridge not for the device has been detected.		Replace with a toner cartridge for the device.
ASIC ERROR	CU PCB (CU) DCON Access Error DCON Clock Output Error	 Does error reoccur? Does error reoccur?	 Yes Yes	Turn on the power Replace CU PCB Replace PU PCB
SDRAM ERROR	CU PCB (CU) DCON Access Error *RAMRD/WR ERROR for VIDEO	Does error reoccur? Does error reoccur?	Yes Yes	Turn on the power Replace CU PCB Replace PU PCB
xxxxxxxxxxxxxxxx CRC CHECK NG ( )	CRC Check Error of PU down load Data	After the download of PU data (PU firmware, custom media data), CRC check error has been detected.		After turning on the power, redownload. (this does not occur since this processing is not performed in normal operation)
WDT ERROR	PU Firmware Runaway	Does error reoccur?	Yes	Turn on the power Replace PU PCB.
ABORT xxx = xxxxxxxx	PU Firmware Runaway	Does error reoccur?	Yes	Turn on the power Replace PU PCB.
IRQXX_IPT	PU Firmware Runaway	Does error reoccur?	Yes	Turn on the power Replace PU PCB.

Note! SERVICE CALL Error 168, Error 171, Error 175, Error 903, and Error 904 are likely issued when the printer is cool at 0 deg.C or lower. Therefore, if the printer is cool, turn on the power again after it has warmed up.

7.5.2 Preparing for troubleshooting

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Note! When the PU PCB is replaced, first read the data of the EEPROM chip of the old PCB, and then, copy it to the new PCB after the replacement. (See 5.4.1 Precautions on the replacement of engine control PCB).

7.5.2.(1) LCD Display Malfunction

Memo For numbers of (1) through (26) after each connector name, refer to 7.5.2 (18) "Connection Diagrams".

(1-1) Nothing is displayed in LCD

Confirmation Items	Confirmation Tasks	Action at NG
(1-1-1) Confirm fuse		
F5 (fuse) of PU PCB	Check to see if F5 is blown out.	Replace F5 or PU PCB.
(1-1-2) Confirm connection systems		
Connection between low voltage power supply unit and PU PCB	Check to see if the cord from the low-voltage power supply is connected properly to the POWER connector ⑩ of the PU PCB. Check for any incomplete connection or skew insertion.	Redo the insertion of the cord properly
Cord ASSY interconnecting the low-voltage power supply unit and the PU PCB	Check to see if the cord has any wire breakage. Check to see if the cord has any peel-off of the covering. Check for any fault in the cord ASSY, such as dislocated wire, etc.	Replace the cord with a normal one.
Connection between PU PCB and operator panel PCB (PRP PCB)	Check to see if the 7pin FFC is properly plugged into the OPE connector ⑰ of the PU PCB. Check to see if the 7pin FFC is properly plugged into the CN connector ⑲ of the operator panel PCB (PRP PCB). Check for any incomplete connection or skew insertion.	Redo the insertion of the cord properly.
FFC interconnecting the PU PCB and the operator panel PCB (PRP PCB).	Check for wire breakage with a circuit-tester. Also, check visually for peel-off of the covering.	Replace the FFC with a normal one.
FFC interconnecting the PU PCB and the CU PCB.	Check to see if the 12pin FFC is properly plugged into the CUIF connector ⑨ of the PU PCB. Check similarly the CU PCB side also.	Replace the low voltage power Supply.
(1-1-3) Confirm the power systems		
AC power supplied to the printer	Check the supply voltage of the AC power.	Supply AC power.
Voltage setting of low voltage power supply unit (100V system/230V system)	Measure the supplied AC voltage. Check the power supply settings of the printer in use. (Check the shortcircuit plug designed for switching of low-voltage power setting. Short-circuit plug provided/not provided = 100V system/230V system.)	Set the low-voltage power setting to the proper values.
5V power supplied to the PU PCB	Check the 5V power at pin 7 of the POWER connector ⑩ of the PU PCB.	Replace the low voltage power supply.
5V power supplied to the operator panel PCB (PRP PCB)	Check the 5V power at pin 5 of the CN connector of the operator panel PCB (PRP PCB).	Replace the F5 or PU PCB.
(1-1-4) Confirm the power short		
5V power and 24V power supplied to the PU PCB	Check for short-circuiting through the POWER connector ⑩ of the PU PCB. 4, 5, 6 pin: 24V 7 pin: 5V 8 pin: 0VL 1, 2, 3 pin: 0VP If there is any short-circuiting, locate it by isolation. Unplug the cords connected to the PU PCB, one by one, and locate the short-circuited part.	Replace the short circuited part.

(1-2) The first line is black display in LCD

Confirmation Items	Confirmation Tasks	Action at NG
(1-2-1) Check of connections		
Connection between low voltage power supply unit and PU PCB	Check to see if the cord from the lower-voltage power supply is connected properly to the POWER connector ⑩ of the PU PCB. Check for any incomplete connection or skew insertion.	Redo the insertion of the cord properly.
Cord ASSY interconnecting the low-voltage power supply unit and the PU PCB	Check to see if the cord has any wire breakage. Check to see if the cord has any peel-off of the covering. Check for any fault in the cord ASSY, such as dislocated wire, etc. Check to see if the wires are properly connected on a 1-pin to 1-pin basis.	Replace the cord with a normal one.
Connection between PU PCB and operator panel PCB (PPK PCB)	Check to see if the 7-pin FFC is properly plugged into the OPE connector ⑰ of the PU PCB. Check to see if the 10-pin FFC is properly plugged into the CN connector ⑲ of the operator panel PCB (PPK PCB). Check for any incomplete connection or skew insertion.	Redo the insertion of the cord properly.
FFC interconnecting the PU PCB and the operator panel PCB (PPK PCB).	Check for wire breakage with a circuit-tester. Also, check visually for peel-off of the covering.	Replace the FFC with a normal one.
(1-2-4) Check of LSI operation		
I/F signal from PU PCB to operator panel PCB (PPK PCB)	Check to see if there is signal output through the OPE connector ⑰ of the PU PCB. Pin 4: CLK Pin 7: Transmitting data (Transmission of PU PCB) Pin 9: CLR The signal is permanently output if the PCB is normal.	Replace the operator panel PCB.
I/F signal from operator panel PCB (PPK PCB) to PU PCB	Check to see if there is signal output through the OPE connector ⑰ of the PU PCB. Pin 3: Receiving data (Reception of PU PCB) The signal is permanently output if the PCB is normal.	Replace the operator panel PCB (PPK PCB).

(1-3) PLEASE WAIT

(The display changes to “COMMUNICATION ERROR” if you leave them as they are)

Confirmation Items	Confirmation Tasks	Action at NG
(1-3-1) Check of installed state of PCB		
Connected state between PU PCB and CU PCB	Check the engagement between the CUIF connector ⑨ of the PU PCB and the FFC connector of the CU PCB. (Engagement between PU and CU PCBs)	Connect the FFC properly.
(1-3-2) Execution of upgrading of PU firmware version		
Upgrading of PU firmware version	This indication will be produced following upgrading of the PU firmware version. Verify the PU version by conducting Menu Print or using the maintenance function.	If the error recurs even after the power is turned on again, conduct the checking of (1-3-1) and (1-3-2).

(1-4) An error message related to the operation panel is displayed.

Confirmation Items	Confirmation Tasks	Action at NG
(1-4-1) Error messages		
Error messages	Check the details in the Error Message Table.	Follow the instructions.

(1-5) "RAM CHECK" or "INITIALIZING" are displayed

Confirmation Items	Confirmation Tasks	Action at NG
(1-5-1) Indications on the operator panel freeze.		
Operator panel indications	The indication of "RAM CHECK" or "INITIALIZING" remains on permanently.	Replace ROM DIMM of CU or the CU PCB.

7.5.2.(2) Irregular Operation of the device after turning on the power

(2-1) No operation

Confirmation Items	Confirmation Tasks	Action at NG
(2-1-1) Check of parts related to power supply		
AC power supplied to the printer	Check the supply voltage of the AC power.	Supply AC power.
Voltage setting of low voltage power supply unit (100-V system/230-V system)	Measure the supplied AC voltage. Check the power supply settings of the printer in use. (Check the short-circuit plug designed for switching of low-voltage power supply setting [CN6]. Short-circuit plug provided/not provided = 100-V system/ 230-V system.)	Set the low-voltage power setting to the proper values.
5V and 24V power supplied to the PU PCB	Check the power through the POWER connector of the PU PCB. 4, 5, 6 pin: 24V 7 pin: 5V 8 pin: 0VL 1, 2, 3 pin: 0VP	Replace the low voltage Power supply.
(2-1-2) Check of connections		
Connected state of operator panel	Check the items of (1-1). The operator panel needs to be detected and start operating, so that the printer functions.	Follow the description of (1-1).

(2-2) Abnormal sound

Confirmation Items	Confirmation Tasks	Action at NG
(2-2-1) Check for motor step-out (Abnormal driver)		
Operating state of motors	Use the self-diagnostic mode to check to see if the motors are operating normally. Check in the presence and absence of a load. If abnormal, the motors will emit a "boo".	Replace the PU PCB.
State of motor cords	Check the laying of motor cords. Check visually, and also check for short-circuiting with a circuit-tester. Disconnect the motor cord on the PCB side, and check the resistance between each pin of the disconnected cord side and the FG. Replace the motor cord.	Redo the laying of the cord properly.
(2-2-2) Check for motor step-out (Loading problem of consumables)		
Operating state of motors	Use the self-diagnostic mode to check to see if the motors are operating normally. Check in the presence and absence of a load. If abnormal, the motors will emit a "boo".	Replace the co-rresponding consumable. To use a new consumable on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(2-2-3) Check for gear tooth skip (Loading problem of consumables)		
Operating state of motors	Use the self-diagnostic mode to check to see if the motors are operating normally. Check in the presence and absence of a load. If abnormal, the motors will emit "pup, pup".	Replace the corresponding consumable. To use a new consumable on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
Installed state of consumables	Visually check to see if the consumables are installed in the prescribed positions where their gears are engaged.	Replace or modify the necessary mechanical part.

Confirmation Items	Confirmation Tasks	Action at NG
(2-2-4) Check of laying of cords		
Laying of peripheral cords around each cooling FAN	Check to see if the peripheral cords of the FAN are laid so poorly that the FAN blades are touching the cords. If the cords are laid improperly, "cluck, cluck" will be heard.	Correct the laying of cords.
(2-2-5) Check of installed state of mechanical parts		
Check the installed state of the sill plates under the CU and PU PCBs.	Remove the PCBs and check visually the installed state of the sill plates.	If the sill plates are not hooked in the prescribed positions, correct their installation.

(2-3) Abnormal odor

Confirmation Items	Confirmation Tasks	Action at NG
(2-3-1) Location of source of foul smell		
Fuser unit	Take out the fuser unit, and check for the smell.	Conduct (2-3-2).
Low voltage power supply unit	Take out the lower-voltage power supply unit, and check for the smell.	Replace the low voltage power supply unit.
(2-3-2) Check of state of Fuser unit		
Life count of fuser unit	Check the life count of the fuser unit in the self-diagnostic mode.	If the unit is like-new, it necessarily emits some foul smell.
Check for foreign matter in fuser unit	Check for any foreign matter trapped in the fuser unit, such as a paper chip.	Remove the foreign matter.

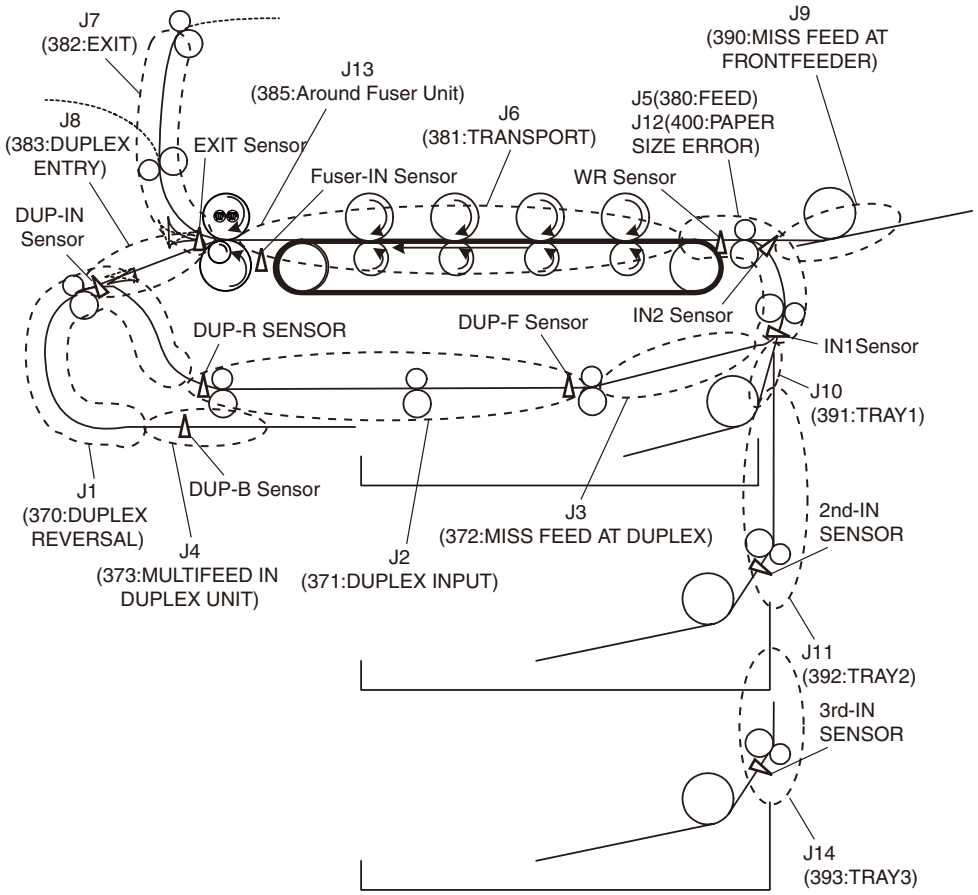
(2-4) Slow starting time

Confirmation Items	Confirmation Tasks	Action at NG
(2-4-1) Check of fuser unit		
Halogen lamp	Check the label on the back of the fuser unit to make sure that the voltage of the lamp is 100V.	Replace the fuser unit.

(3) Error number and jam location at paper jam

Error No.	Name	Reference	Corresponding Sensor	Jam Release Method
370	Duplex reversal	J1	DUP-IN, DUP-R	Jam release method ③
371	Duplex input	J2	DUP-F, DUP-R	Jam release method ③
372	Feed error at Duplex	J3	IN1	Jam release method ①
373	Multi-feed in Duplex Unit	J4	DUP-B	Jam release method ③
380	Feed	J5	IN2, WR	Jam release method ①
381	Transport	J6	IN1, IN2, WR, Fuser-IN, EXIT	Jam release method ②
382	Exit	J7	EXIT, Fuser-IN	Jam release method ②
383	Duplex entry	J8	EXIT, DUP-IN, DUP-R	Jam release method ②
385	Around Fuser Unit	J13	Fuser thermister	Jam release method ②
390	Feed error at front feeder	J9	IN2, WR	Jam release method ①
391	Tray1	J10	IN1	Jam release method ①, ④
392	Tray2	J11	2nd-IN	Jam release method ④
393	Tray3	J14	3rd-IN	Jam release method ④
400	Paper size error	J12	IN1	Jam release method ①
401	Paper size error			

Diagram of jam location



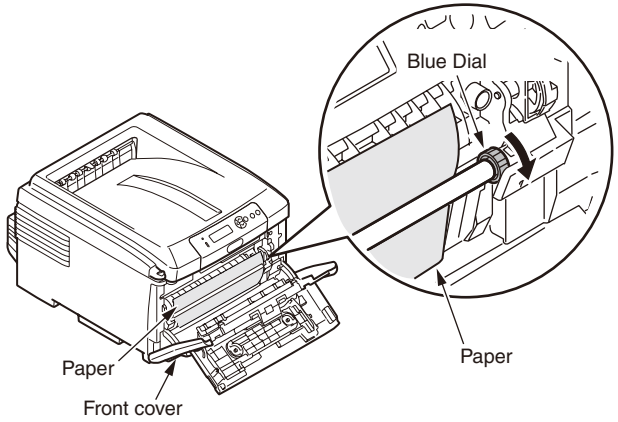
JAM RELEASE METHOD ①

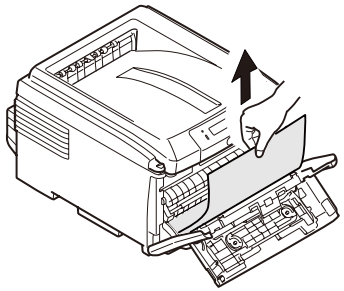
Removing the jammed paper

Front cover section (Codes: 372, 380, 390, 391, 400)

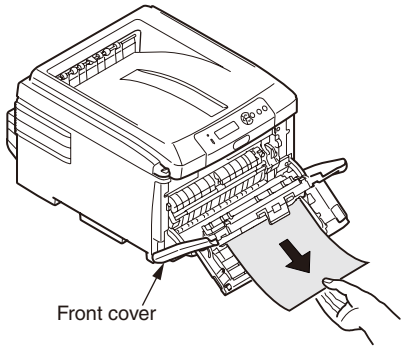
Open the front cover, and if the leading end or trailing end of the jammed paper is visible, pull out the paper slowly. If code 400 is issued, the paper may be unloaded automatically. If that is the case, opening and closing of the cover will clear the error.

If you see the top edge of paper





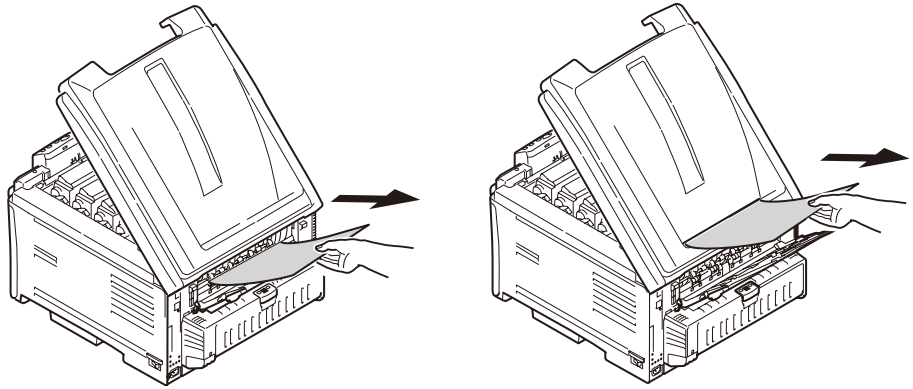
If you do not see the top edge of paper



Paper Exit Part (Code: 382)

Pull out the jammed paper from the exit slowly.

Note! Even when paper is jammed in the delivery section, pull out the paper to the inside of the printer, if it is visible under the top cover. Forcing the paper out toward the rear could damage the fuser unit.



JAM RELEASE METHOD ②

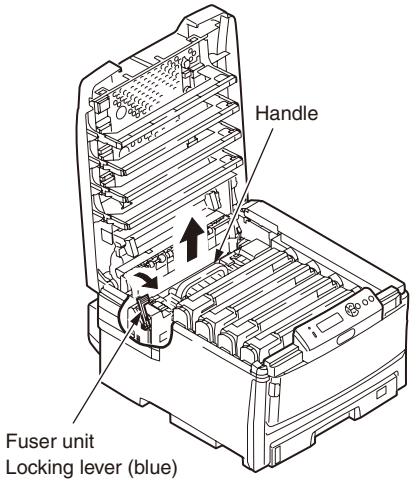
FUSER unit section (Codes: 381, 382, 383,385)

⚠Caution	Personal injuries may occur.	

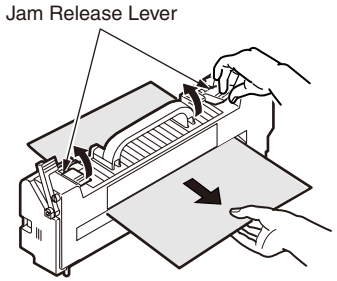
The fuser unit can be very hot. Be careful not to touch it. If the unit remains hot, do not hasten to work, but wait, until after the unit has cooled down a little, and then remove the paper.

(1) Raise the lock levers (blue) of the fuser unit in the direction of the arrows.

(2) Take out the fuser unit holding it by the handle, and place it on a flat table.

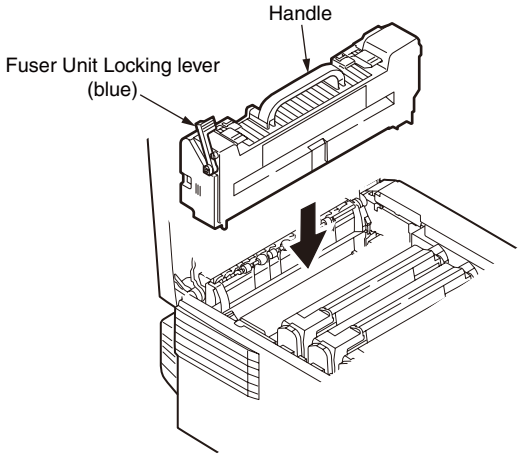


(3) Pull the jam release levers (two places) up and pull the jammed paper slowly in the arrow direction (toward you).



(4) Hold the fuser unit again by the handle and put it gently back in the printer.

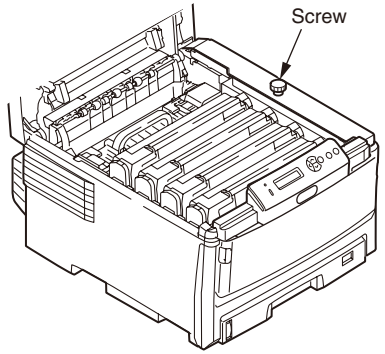
(5) Push the lock levers (blue) of the fuser unit toward the rear, and fasten the unit.



Note! After a jammed paper has been removed from the fuser unit section, unfixed toner may still remain inside the fuser unit. Therefore, execute the Menu Map print (Subsection 3.6), or print blank paper several times.

If the paper jam error is not cleared even after the jammed paper has been removed, remove the other jammed paper by the procedure described below.

(1) Discharge static electricity by touching the screw by hand.

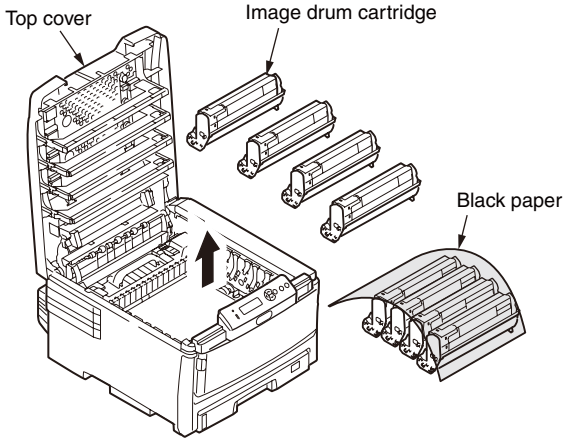


(2) Take out the image drum cartridges (4), and place them on a flat table.

(3) Cover the image drum cartridges thus taken out with a black sheet of paper.

Note! • The image drums (green tubular parts) are extremely vulnerable. Use good caution in handling them.

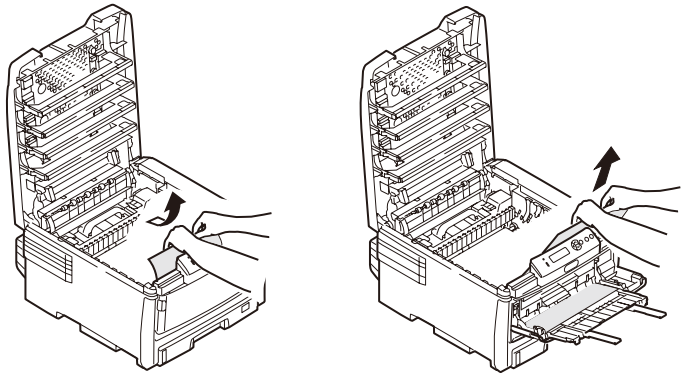
• Do not expose the image drum cartridges to direct sun or intense light (over approximately 1500 uxes). Even under the room lighting, do not leave them exposed for five minutes or longer.



(4) Pull out the jammed paper slowly.

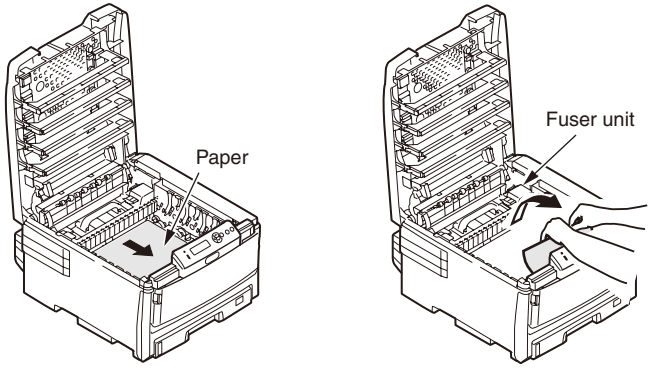
When the leading end of the paper is visible

Pull out the paper slowly to the inside of the printer.



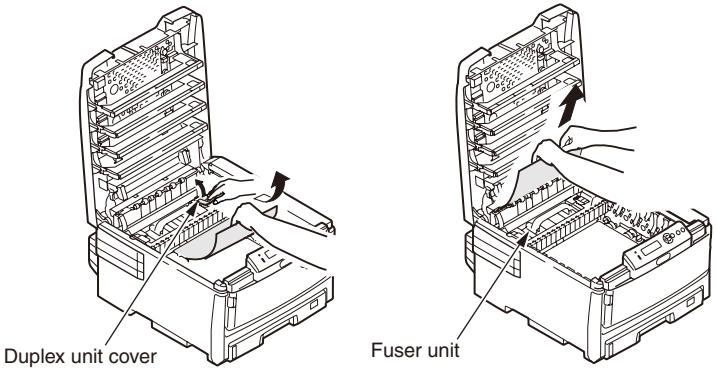
When neither the leading end nor the trailing end is visible

First slide the jammed paper into the direction of the arrow, and then, pull it out slowly.



When the trailing end of the paper is visible

Pull the jam release levers (two places) on the fuser unit up and pull out the jammed paper.

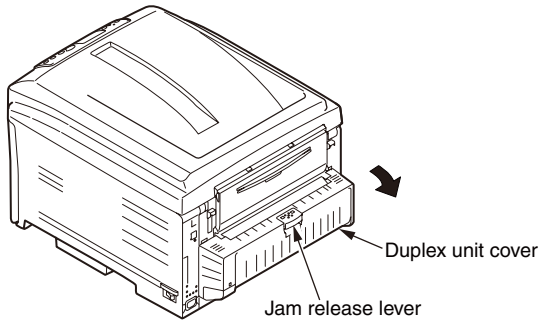


(5) Put the image drum cartridges back in place.

JAM RELEASE METHOD ③

Two -sided print unit section (Codes: 370, 371, 373)

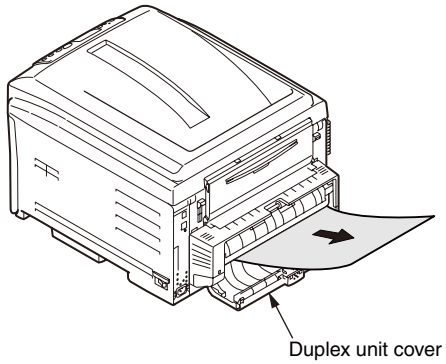
(1) Open the two-sided print unit cover by pushing the jam releasing lever of the two-sided print unit section.



(2) Take out the jammed paper.

If the paper is not visible, close the two-sided print unit cover briefly, and the paper will be unloaded automatically.

Note! If the two-sided print unit needs to be drawn out, turn off the power of the printer.



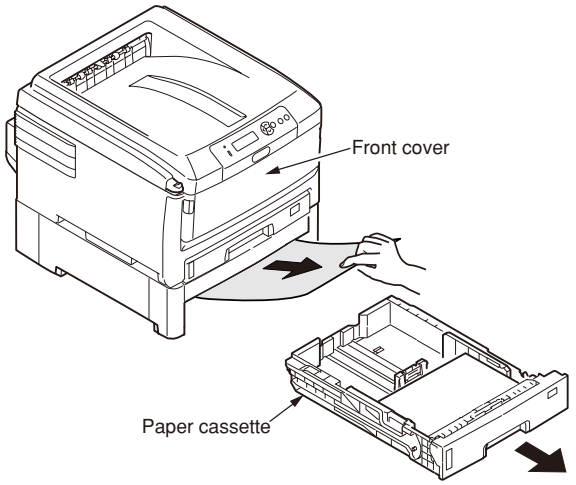
JAM RELEASE METHOD ④

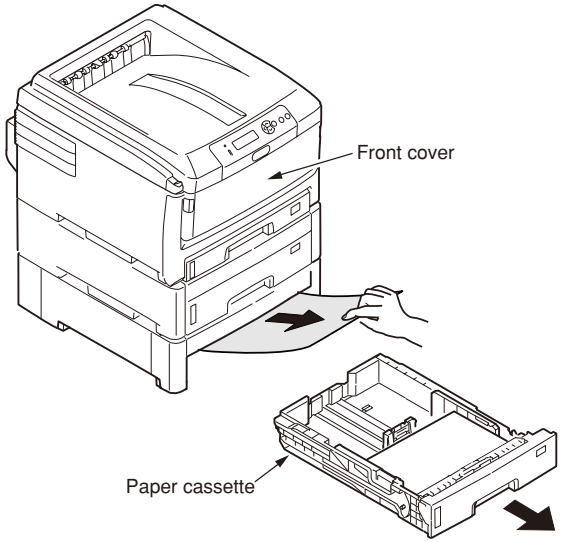
Second tray unit section (Optional)(Codes: 391, 392, 393)

(1) Draw out the paper cassette and remove the jammed paper.

(392: Second Tray, 393 Third Tray)

(2) After removing the paper, open and close the front cover by holding the handle under the operator panel.





7.5.2.(3) Paper Feed Jam(Error 391:1st Tray)

(3-1) Paper feed jam occurs right after turning on the power (1st Tray)

Confirmation Items	Confirmation Tasks	Action at NG
(3-1-1) Check of state of running route		
Paper running route in front unit	Open the front cover, and check to see if there is paper jammed on the running route.	Remove the jammed paper.
(3-1-2) Check of state of mechanical parts		
Check the sensor levers of inlet sensors 1 and 2.	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the sensor lever with a normal one.
(3-1-3) Check of electrical parts		
Check the state of sensor signal detection.	Use the SWITCH SCAN function of the Maintenance Menu to check to see if the sensor signal is detected normally.	Replace the PU PCB, front sensor PCB (RSF PCB) or the connection cord.
Check the output levels of inlet sensors 1 and 2	Check the following signals through the FSNS connector ⑯ of the PU PCB. Pin 4: Inlet sensor 1 Pin 3: Inlet sensor 2_Confirm that the above signal levels vary as the sensor levers are actuated.	Replace the front sensor PCB (RSF PCB).
Check the power supply of the front sensor PCB (RSF PCB).	Check the 5-V power through the FSNS connector ⑯ of the front sensor PCB (RSF PCB). Pin 5: 5V power Pin 1: 0VL	Replace the connection cord.

(3-2) Paper feed jam occurs right after paper feeding starts (1st Tray)

Confirmation Items	Confirmation Tasks	Action at NG
(3-2-1) Check of state of running route		
Paper running route in front unit	Check to see if there is paper jammed on the running route.	Remove the jammed paper.
(3-2-2) Check of state of mechanical parts		
Check the sensor levers of inlet sensors 1 and 2.	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the sensor lever with a normal one.
Check the separator assemblies of the feed roller, the pickup roller and the tray.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller or the pickup roller has worn out or not.	Replace the separator assemblies of the feed roller, pickup roller and tray.
(3-2-3) Check of operating state of motors		
Feed motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the feed motor operates normally.	Replace the PU PCB or feed motor.
Feed motor driver	Unplug the HOPIDUP connector ① of the PU PCB, and confirm the following on the connector side: Several Mohms between pin 1 and FG Several Mohms between pin 2 and FG Several Mohms between pin 3 and FG Several Mohms between pin 4 and FG	Replace the PU PCB.

Confirmation Items	Confirmation Tasks	Action at NG
(3-2-4) Check of connections		
Feed motor drive cord	Check the connected state of the cord. Check for incomplete connection or skew insertion, and check the cord visually to see if it has any assembling problem.	Redo the connection properly. Replace the cord with a normal one.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the HOPSIZE connector ① of the PU PCB and check the followings at the cable side. Short circuit between pin1 - FG Short circuit between pin1 - FG Short circuit between pin3 - FG Short circuit between pin4 - FG	Replace the solenoid assembly and re-assemble the printer correctly.
Feed motor	Confirm 3.4Ω or 5Ω of resistance is seen between 1pin- 2pin,and 3pin-4pin each at the cord side after pulling out HOPIDUP connector ① of the PU board.	Replace the feed motor.
(3-2-5) Check of operating state of solenoid		
Feed solenoid	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the feed solenoid operates normally. Make this checking with the right side plate detached, so that the solenoid is visible.	Replace the PU PCB or feed solenoid.
	Check to see if there is anything that interferes with the moving part of the solenoid (cord, etc.).	Correct the assembling of the printer to make it normal.

Confirmation Items	Confirmation Tasks	Action at NG
(3-2-6) Check of connections		
Feed solenoid cord	Check the connected state of the cord. Check for any incomplete connection or skew insertion, and check the cord visually if it has any assembling problem.	Correct the connection properly. Replace the cord with a normal one.
Feed solenoid cord	Check to make sure that the cord is not caught under any assembled part of the printer. Unplug the HSOL connector ⑭ of the PU PCB, and confirm the following on the cord side: Short-circuiting between pin 1 and FG Unplug the HSOL connector ⑭ , and check to see if there is a resistance of approximately 89Ω between pin 1 and pin 2.	Replace the solenoid Assy, and redo the reassembling properly.

7.5.2.(4) Paper Feed Jam (Error 380)

(4-1) Paper feed jam occurs right after turning on the power

Confirmation Items	Confirmation Tasks	Action at NG
(4-1-1) Check of state of running route		
Paper running route in front unit	Check to see if there is paper jammed on the running route.	Remove the jammed paper.
(4-1-2) Check of state of mechanical parts		
Check the sensor levers of inlet sensor 1, 2 and WR sensor.	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the sensor lever with a normal one.
(4-1-3) Check of electrical parts		
Check the state of sensor signal detection.	Use the SWITCH SCAN function of the maintenance menu to check to see if the sensor signal is detected normally.	Replace the PU PCB, front sensor PCB (RSF PCB) or the connection cord.
Check the output levels of inlet sensor 1, 2 and WR sensor	Check the following signals through the FSNS connector ⑯ of the PU PCB. Pin 4: Inlet sensor 1 Pin 3: Inlet sensor 2 Pin 2: WR sensor Confirm that the above signal levels vary as the sensor levers are actuated.	Replace the front sensor PCB (RSF PCB).
Check the power supply of the front sensor PCB (RSF PCB).	Check the 5-V power through the CN connector ⑯ of the front sensor PCB (RSF PCB). Pin 5: 5-V power Pin 1: 0VL	Replace the connection cord.

(4-2) Paper feed jam occurs right after paper feeding starts (Multi-purpose Tray)

Confirmation Items	Confirmation Tasks	Action at NG
(4-2-1) Check of state of running route		
Paper running route in multi-purpose tray	Check to see if there is paper jammed on the running route.	Remove the jammed paper.
(4-2-2) Confirm condition of mechanical parts		
Check sensor levers at the entrance sensor 1, 2 and WR sensor lever	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the sensor lever with a normal one.
(4-2-3) Check of the operating state of motors		
Feed motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the feed motor operates normally.	Exchange a PU board or paper feed motor.
Feed motor driver	Unplug the HOPIDUP connector① of the PU PCB, and confirm the following on the connector side: Several MΩ between pin 1 and FG Several MΩ between pin 2 and FG Several MΩ between pin 3 and FG Several MΩ between pin 4 and FG	Exchange a PU board.

Confirmation Items	Confirmation Tasks	Action at NG
(4-2-4) Check the system connection		
Paper feed motor drive cable	Check the connection condition of the cables. Check if the connector is connected in the half-way only or not, and check if the connector is inserted in a slanted angle or not. Check also that cables are assembled without any abnormality.	Normalize the connection condition. Replace the cable with the normal cable.
Paper feed motor drive cable	Check that any cable is not pinched during assembling of the printer. Remove the HOPSIZE connector ① of the PU PCB and check the followings at the cable side. Short circuit between pin - FG Short circuit between pin2 - FG Short circuit between pin3 - FG Short circuit between pin4 - FG	Replace the cable with the good one that normalizes the connection condition.
Paper feed motor	Remove the HOPSIZE connector ① of the PU PCB and check that approx. 3.4Ω can be measured between pin1 -pin-2 at the cable end, and that approx. 5Ω can be measured between pin3 -pin-4 respectively.	Replace the paper feed motor.

7.5.2.(5) Paper Feed Jam (Error 390:Multi-purpose Tray)

(5-1) Paper feed jam occurs right after turning on the power (Multi-purpose Tray)

Confirmation Items	Confirmation Tasks	Action at NG
(5-1-1) Check of state of running route		
Paper running route in front unit	Check to see if there is paper jammed on the running route.	Remove the jammed paper.
(5-1-2) Check of state of mechanical parts		
Check the sensor levers of inlet sensor 2 and WR sensor.	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the sensor lever with a normal one.
(5-1-3) Check of electrical parts		
Check the state of sensor signal detection.	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if the sensor signal is detected normally.	Replace the PU PCB, front sensor PCB (RSF PCB) or the connection cord.
Check the output levels of inlet sensor 1, 2 and WR sensor	Check the following signals through the FSNS connector ⑯ of the PU PCB. Pin 2: WR sensor Pin 3: Inlet sensor 2 Confirm that the above signal levels vary as the sensor levers are actuated.	Replace the front sensor PCB (RSF PCB).
Check the power supply of the front sensor PCB (RSF PCB).	Check the 5-V power through the CN connector ㉕ of the front sensor PCB (RSF PCB). Pin 5: 5-V power Pin 1: 0VL	Replace the connection cord.

(5-2) Paper feed jam occurs right after paper feeding starts (Multi-purpose Tray)

Confirmation Items	Confirmation Tasks	Action at NG
(5-2-1) Check of state of running route		
Paper running route in multi-purpose	Check to see if there is paper jammed on the running route.	Remove the jammed paper.
Sheet receive of multi-purpose tray	Check to see if the sheet receive is always located in the upper position.	Modify the tray, so that the sheet receive will be raised to the prescribed position.
(5-2-2) Confirm condition of mechanical parts		
Check sensor levers at the entrance sensor 2 and WR sensor lever	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the sensor lever with a normal one.
Planetary gears for paper feed control	Conduct the Motor and Clutch Test of the self-diagnostic mode, and actuate the feed motor (FRONT MOTOR) to make sure that both of the planetary gears rotate in their lower positions. (The planetary gear box is the right-hand white molded section, which is accessible by opening the front cover.)	Replace the planetary gear box.
Front cover	Check to see if the right and left locks of the front cover are properly locked.	Replace the front cover Assy.
Check the paper feed roller and the pickup roller.	Check if any foreign materials such as paper dust on the surface of the feed roller or of the pickup roller or not.	Remove the foreign material.
	Check if the feed roller has worn out or not.	Replace the feed roller.
(5-2-3) Check of the operating state of motors		
Feed motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the feed motor operates normally.	Exchange a PU board or paper feed motor.
Feed motor driver	Unplug the HOPIDUP connector ① of the PU PCB, and confirm the following on the connector side: Several MΩ between pin 1 and FG Several MΩ between pin 2 and FG Several MΩ between pin 3 and FG Several MΩ between pin 4 and FG	Exchange a PU board.
(5-2-4) Check of connections		
Feed motor drive cord	Check a connection status of the cord. HOPIDUP connector ① of the PU board. Check half connection, incomplete plug-in or installation status of the cord by eyes.	Correct the connection properly. Replace the cord with a normal one.
Cord to drive a paper feed motor	Check to make sure that the cord is not caught under any assembled part of the printer. Unplug the HOPIDUP connector ① of the PU PCB, and confirm the following on the cord side: Short-circuiting between pin 1 and FG Short-circuiting between pin 2 and FG Short-circuiting between pin 3 and FG Short-circuiting between pin 4 and FG	FG_Return the installation to a right status by exchanging a cord.
Feed motor	Confirm 3.4Ω or 5Ω of resistance is seen between 1pin-2pin, and 3pin-4pin each at the cord side after pulling out HOPIDUP connector ① of the PU board.	Replace the feed motor

7.5.2.(6) Paper Path Jam(Error 381)

(6-1) Paper path jam occurs right after turning on the power

Confirmation Items	Confirmation Tasks	Action at NG
(6-1-1) Check of state of running route		
Paper running route in front Unit.	Check to see if there is paper jammed on the running route.	Remove the jammed paper.
(6-1-2) Check of state of mechanical parts		
Check sensor levers of WR sensor.	Confirm that there is no abnormality in the shape of the sensor lever and in the operation.	Replace the sensor lever with a normal one.
(6-1-3) Check of electrical parts		
Check the state of sensor signal detection.	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if the sensor signal is detected normally.	Replace the PU PCB, front sensor PCB (RSF PCB) or connection cord.
Check the output level of the WR sensor.	Check the following signal through the FSNS connector ⑯ of the PU PCB. Pin 2: WR sensor Confirm that the above signal level varies as the sensor lever is actuated.	Replace the front sensor PCB (RSF PCB).
Check the power supply of the front sensor PCB (RSF PCB).	Check 5V power with CN connector ㉕ of a front sensor board (RSF PCB). 1pin:5V Power 5pin:0VL	Replace the connection cord.

(6-2) Paper path jam occurs right after feeding paper

Confirmation Items	Confirmation Tasks	Action at NG
(6-2-1) Check of state of running route		
Paper running route on the belt	Remove the ID unit, and check to see if there is paper jammed on the running route.	Remove the jammed paper.
(6-2-2) Check of state of mechanical parts		
Check the sensor lever of the WR sensor	Check to see if the sensor lever demonstrates any abnormal shape or motion.	Replace the sensor lever with a normal one.
(6-2-3) Check of operating state of motors		
Feed motor, belt motor, ID motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the feed motor, belt motor and ID motor operate normally. Make this checking in the presence and absence of a load.	Replace the PU PCB, if the feed motor, belt motor, ID-up motor or ID motor is faulty. Replace the feed motor, belt motor or ID motor. Replace the ID unit or belt unit. To use a new consumable on a trial basis, use FUSE KEEP MODE of the System Maintenance
Feed motor driver, ID upmotor driver, and belt motor driver	Unplug the HOPIDUP connector ① of the PU PCB, and confirm the following on the connector side: Several MΩ between pin 1 and FG Several MΩ between pin 2 and FG Several MΩ between pin 3 and FG Several MΩ between pin 4 and FG Unplug the BELT connector ③ of the PU PCB, and confirm the following on the connector side: Several MΩ between pin 1 and FG Several MΩ between pin 2 and FG Several MΩ between pin 3 and FG Several MΩ between pin 4 and FG Several MΩ between pin 5 and FG Several MΩ between pin 6 and FG Several MΩ between pin 7 and FG Several MΩ between pin 8 and FG	Replace the PU PCB, if the feed motor, belt motor, ID up-motor or ID motor is faulty.

Confirmation Items	Confirmation Tasks	Action at NG
(6-2-4) Check of connections		
Feed motor drive cord, ID motor drive cord, belt motor, ID-up motor drive cord, fuser drive cord	Check the connected states of the cords. Check for any incomplete connection or skew insertion of the HOPIDUP connector ① , DCID connector ② , DCHEAT connector ④ , BELT connector ③ and RELAY Connector ⑧ of the PU PCB. Check for any incomplete connection or skew insertion, and examine the cords visually to see if they have any assembling problem.	Correct the connection properly. Replace the cord with a normal one.
Feed motor drive cord, ID motor drive cord, belt motor, ID-up motor drive cord	Check to make sure that none of the cords is caught under any assembled part of the printer. Unplug the HOPIDUP connector ① of the PU PCB, and confirm the following on the cord side: Short-circuiting between pin 1 and FG Short-circuiting between pin 2 and FG Short-circuiting between pin 3 and FG Short-circuiting between pin 4 and FG Unplug the BELT connector ③ of the PU PCB, and confirm the following on the cord side: Short-circuiting between pin 1 and FG Short-circuiting between pin 2 and FG Short-circuiting between pin 3 and FG Short-circuiting between pin 4 and FG Short-circuiting between pin 5 and FG Short-circuiting between pin 6 and FG Short-circuiting between pin 7 and FG Short-circuiting between pin 8 and FG	Replace the cord, and correct the assembling to make it normal.
Feed motor, belt motor, ID up-motor	Unplug the connectors of the respective PCBs, and confirm that there are the following resistances between the pins of the cord side: HOPIDUP connector ① of PU PCB Between pin 1 and pin 2: Approx. 3.4 or 5Ω Between pin 3 and pin 4: Approx. 3.4 or 5Ω Between pin 5 and pin 6: Approx. 3.4 or 5Ω Between pin 7 and pin 8: Approx. 3.4 or 5Ω BELT connector ③ of PU PCB Between pin 1 and pin 2: Approx. 6.1 or 3.5 Ω Between pin 3 and pin 4: Approx. 6.1 or 3.5 Ω	Replace the feed motor, ID motor, or belt motor.

(6-3) Paper path jam occurs in a path route

Confirmation Items	Confirmation Tasks	Action at NG
(6-3-1) Check of operating state of motors		
Feed motor, belt motor, ID motor, ID up/down-motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the feed motor, belt motor and ID motor operate normally. Make this checking in the presence and absence of a load.	Replace the PU PCB, or replace the feed motor, belt motor, ID motor, or ID up-motor, or replace the ID unit or belt unit. To use a new ID unit or belt unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
Feed motor driver, belt motor driver, ID up-motor driver	Unplug the HOPIDUP connector ① of the PU PCB, and confirm the following on the connector side: Several MΩ between pin 1 and FG Several MΩ between pin 2 and FG Several MΩ between pin 3 and FG Several MΩ between pin 4 and FG Several MΩ between pin 5 and FG Several MΩ between pin 6 and FG Several MΩ between pin 7 and FG Several MΩ between pin 8 and FG Unplug the BELT connector ③ of the PU PCB, and confirm the following on the connector side: Several MΩ between pin 1 and FG Several MΩ between pin 2 and FG Several MΩ between pin 3 and FG Several MΩ between pin 4 and FG	Replace the PU PCB, if the feed motor, belt motor or D motor is faulty, or replace the motor driver PCB if the belt motor is faulty.

(6-4) Paper path jam occurs right after reaching the fuser unit

Confirmation Items	Confirmation Tasks	Action at NG
(6-4-1) Check of operating state of motors		
Fuser motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the fuser motor operates normally. Make this checking in the presence and absence of a load.	Replace the PU PCB. Replace the fuser motor. Replace the fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(6-4-2) Temperature control of rotating roller		
Heat roller detection temperature	Check the detection temperature of the heat rollers in the self-diagnostic mode. Check to see if an abnormally low or high temperature is detected.	Replace the fuser unit, or replace the junction PCB (P6Y PCB) or PU PCB. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(6-4-3) Check of installed state of fuser unit		
Fuser unit	Check to see if the fuser unit is properly installed (whether it is pushed in to the lowest position).	Install the unit properly in the printer.

7.5.2.(7) Paper Exit Jam(Error 382)

(7-1) Paper exit jam occurs right after turning on the power

Confirmation Items	Confirmation Tasks	Action at NG
(7-1-1) Check of state of running route		
Paper running route in delivery section	Check to see if there is paper jammed on the running route.	Remove the jammed paper.
(7-1-2) Check of state of mechanical parts		
Check the sensor lever of the delivery sensor	Check to see if the sensor lever demonstrates any abnormal shape or motion.	Replace the sensor lever with a normal one.
(7-1-3) Check of electrical parts		
Check the state of sensor signal detection.	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if the sensor signal is detected normally.	Replace the PU PCB, EXIT sensor or connection cord.
Check the output level of the EXIT sensor.	Check the following signal through the RELAY connector ⑧ of the PU PCB. Pin 9: EXIT sensor Confirm that the signal level varies as the sensor lever is actuated.	Replace the EXIT sensor.
Check the output level of the Fuser IN sensor	Check the following signal through the RELAY connector ⑧ of the PU PCB. Pin 20: Fuser IN sensor Confirm that the signal level varies as the sensor lever is actuated.	Replace the Fuser IN sensor.
Check the power of the junction PCB (P6Y PCB).	Check the 5-V power through the EXIT connector ㉖ of the junction PCB (P6Y PCB). Pin 1: 5-V power Pin 3, 6pin: 0 VL	Replace the connection cord.

Confirmation Items	Confirmation Tasks	Action at NG
(7-1-4) Check of connections		
Signal cord for motor driver PCB, EXIT sensor cord	Check to see if the FFC is properly plugged in the RELAY Connector ⑧ of the PU PCB and the PUIF connector ㉒ of the junction PCB (P6Y PCB). Check to see if the cord is properly connected in the junction PCB (P6Y PCB) and EXIT sensor.	Correct the connection properly.
Signal cord for motor driver PCB, EXIT sensor cord	Check to see if the cords are caught under any other part, or have any peel-off of the covering or any assembling problem.	Replace the connection cord, or correct the assembling properly.

(7-2) Paper exit jam occurs right after feeding paper

Confirmation Items	Confirmation Tasks	Action at NG
(7-2-1) Check of state of running route		
Face-up stacker cover	Check to see if the cover is completely open or closed.	Eliminate imperfect opening or closing of the cover.
Duplex pull-in gate	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the Duplex pull-in gate operates normally. Make sure that it is duly on the exit side.	Replace the duplex pull-in gate or replace the duplex solenoid.
Rear panel	Check to see if the rear panel is installed properly, and if it is not obstructing the paper running route.	Redo the installation of the rear panel.
Running route in delivery section	Check visually for any load that obstructs running of paper along the route of the delivery section. Check to see if the delivery rollers are stiff in rotating.	Modify the load portion.
(7-2-2) Check of state of mechanical parts		
Sensor lever of exit sensor	Check to see if the sensor lever demonstrates any abnormal shape or motion.	Replace the sensor lever with a normal one.

Confirmation Items	Confirmation Tasks	Action at NG
(7-2-3) Motor operation check		
Fuser motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the fuser motor operates normally. Make this checking in the presence and absence of a load.	Replace the PU PCB, fuser motor, or fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(7-2-4) Check of connections		
Fuser motor drive cord	Check the connected state of the cord. Check visually for any incomplete connection or skew insertion of the DCHEAT connector ④ of the PU PCB or any assembling problem of the cord.	Correct the connection properly. Replace the cord with a normal one.
Fuser motor		Replace the fuser motor.

(7-3) Paper exit jam occurs in a path route

Confirmation Items	Confirmation Tasks	Action at NG
(7-3-1) Check of operating state of motor		
Fuser motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the fuser motor operates normally. Make this checking in the presence and absence of a load.	Replace the PU PCB, fuser motor, or fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.

7.5.2.(8) Duplex Print Jam(Error 370, 371, 372, 373, 383)

(8-1) Duplex print jam occurs right after turning on the power

Confirmation Items	Confirmation Tasks	Action at NG
(8-1-1) Check of state of running route		
Paper running route in duplex unit	Check to see if there is paper jammed on the running route. Open the front cover and see if there is paper jammed in the middle of feeding through the Duplex. Open the rear cover and see if there is paper jammed in the reversal path. Draw out the Duplex and see if there is paper jammed at the insertion inlet to the Duplex. Open the running path cover of the Duplex and see if there is paper jammed inside.	Remove the jammed paper.
(8-1-2) Check of state of mechanical parts		
Check the sensor levers of the sensors of Duplex.	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the sensor lever with a normal one.
(8-1-3) Check of electrical parts		
Check the state of sensor signal detection.	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if the sensor signals are detected normally. Check the state of signal detection in two cases: With a sheet of paper placed inside the duplex unit and with the paper removed.	Replace the Duplex PCB (V7Y PCB), sensors or connection cord.

(8-2) Duplex print jam occurs in the Duplex entry

Confirmation Items	Confirmation Tasks	Action at NG
(8-2-1) Check of operating state of solenoid		
Duplex solenoid	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check the operating state of the Duplex solenoid.	Replace the V7Y PCB or solenoid.
Separator DUP (Delivery/ DUP-intake switching gate located immediately after fuser unit)	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check visually the motion of the gate (EXIT SOLENOID). See if its motion is stiff, or its amount of opening/closing is abnormal.	Replace the separator DUP.
On/off timing of duplex solenoid	Conduct test print with the cover open, and see if the separator DUP opens at the right timing.	Replace the WR sensor lever or solenoid.
(8-2-2) Check of operating state of sensor lever		
Dup-IN sensor lever	Open the rear cover, touch the Dup-IN sensor lever by hand, and see if its motion is stiff.	Replace the Dup-IN sensor lever.
Dup-IN sensor	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if the sensor signals are detected normally.	Replace the duplex PCB (V7Y PCB), sensors or connection cord.
(8-2-3) Check of state of running route		
Reversal transport path	Check to see if there are paper chips, burrs or any other foreign matters in the reversal transport path that obstruct the running of paper.	Remove the foreign matters.

Confirmation Items	Confirmation Tasks	Action at NG
(8-2-4) Check of operating state of motor		
Duplex motor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check the operation of the duplex motor. Make this checking by the rotation of the rollers, which are visible as the rear cover is opened.	Replace the V7Y PCB or the motor.
Duplex intake/ reversal roller and its pinch roller	Check to see if the intake/reversal roller on the duplex unit side comes into contact with the pinch roller on the cover side when the rear cover of the Duplex is closed (Is the pinch roller also rotating when the duplex roller is turning?)	Replace the rear cover.

(8-3) Duplex print jam occurs in reverse of the paper

Confirmation Items	Confirmation Tasks	Action at NG
(8-3-1) Check of operating state of sensor lever		
Dup-IN sensor lever	Open the rear cover and touch the Dup-IN sensor lever by hand. Check to see if its motion is stiff.	Replace the Dup-IN sensor lever.
Dup-In sensor	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if the sensor signals are detected normally.	Replace the duplex PCB (V7Y PCB), sensor or connection cord.
(8-3-2) Check of operating state of motor		
Duplex motor	Check visually to see if the paper has started reversal motion from the slit of the rear cover. If the reversal motion has not been started, check to see if the planetary gear in the duplex unit is stiff.	Replace the planetary gear.

(8-4) Duplex print jam occurs in the Duplex input

Confirmation Items	Confirmation Tasks	Action at NG
(8-4-1) Check of operating state of sensor levers		
Dup-R and Dup-F sensor levers	Remove the Duplex, and check the motions of the sensor levers.	Replace the sensor levers.
(8-4-2) Check of sensors		
Check the state of sensor signal defection.	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if the sensor signals are detected normally. Except for the Dup-In sensor, check the state of signal detection in two cases: With a sheet of paper placed inside the duplex unit and with the paper removed.	Replace the duplex PCB (V7Y PCB), corresponding sensor or connection cord.

(8-5) Paper is not fed to a Regist roller from Duplex section

Confirmation Items	Confirmation Tasks	Action at NG
(8-5-1) Check the operational condition of the clutch		
Duplex clutch	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check the operation of the duplex clutch.	Replace the V7Y PCB or the clutch.

7.5.2.(9) Paper Size Error (Error 400, 401)

(9-1) Paper jam occurs when the end of paper is near IN1 sensor.

Confirmation Items	Confirmation Tasks	Action at NG
(9-1-1) Check of state of paper feed		
Multiple feed of paper	Open the front cover, and check to see if multiple sheets are fed through.	If the error recurs even after the jam-med paper was removed, replace the reed of the tray in use.
Paper size	Check to see if the paper size specified for printing matches the size of the paper loaded in the tray.	Change the specified paper size or the paper size in the tray.
Inlet sensor 1	Check to see if the sensor lever demonstrates any abnormal shape or motion.	Replace the sensor lever with a normal one.

7.5.2.(10) ID Unit Up-Down Error(Service Call 140-143)

(10-1) An error occurs in the operation of ID Unit Up

Confirmation Items	Confirmation Tasks	Action at NG
(10-1-1) Check for load in the ascent		
Load in installing/ removing of ID unit	Check to see if any abnormal load is felt in installing or removing the ID unit.	Replace the ID unit or right and left side plates. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
Greasing of right and left up-down link levers	Check to see if the slant parts of the link levers are properly greased.	Apply grease.
Assembled state of right and left up/down link levers	Check to see if any part around the link levers is obstructing their motion.	Reassemble them correctly.
(10-1-2) Up/down mechanism		
Assembled state around link levers	Check to see if the link levers are assembled in such a manner that they link to the planetary gears.	Reassemble them correctly.
Right and left link levers	Check to see if the link levers are placed in the positions where the gears are engaged properly (check to see if the link levers are placed with several gear teeth displaced.)	Reassemble them correctly.
(10-1-3) Check of sensors		
Up/down sensor lever (integrated to the left link lever)	Check to see if the sensor levers demonstrate any abnormal shape or motion.	Replace the left link lever.
Up/down sensor	Conduct the Motor and Clutch Test of the self-diagnostic mode, and check to see if the sensor signals are detected normally. Block the sensor with a piece of paper, and then, unblock it to see if the SCAN state varies.	Replace the high-voltage PCB.

(10-2) An error occurs in the operation of ID Unit Down

Confirmation Items	Confirmation Tasks	Action at NG
(10-2-1) Check of load in the descent		
Load in installing/ removing of ID unit	Check to see if any abnormal load is felt in installing or removing the ID unit.	Replace the ID unit or modify the right and left side plates.
Greasing of right and left up-down link levers	Check to see if the slant parts of the link levers are properly greased.	Apply grease.
Assembled state of right and left up/down link levers	Check to see if any part around the link levers is obstructing their motion.	Reassemble them correctly.

7.5.2.(11) Fuser Unit Error(Error 170-177)

(11-1) An error occurs right after turning on the power

Confirmation Items	Confirmation Tasks	Action at NG
(11-1-1) Malfunction of thermistors ***Note!***		
Upper thermistor, lower thermistor, frame thermistor	Check to see if the thermistors are short-circuited or open. Check the resistance value through the connector pins below the fuser unit. (See Subsection 8.1 Check of resistance values (Fuser unit.)	Replace the fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
Installed state of fuser unit	Check to see if the fuser unit is securely pushed in to such a position that the connector at its lower part is plugged in.	Redo the installation of the fuser unit.

Note! Error 171 and 175 of Service Call may occur when the device is 0°C or less, therefore, the power should be turned on after the device temperature warmed up.

(11-2) An error occurs in 1 min. from turning on the power

Confirmation Items	Confirmation Tasks	Action at NG
(11-2-1) Temperature rise of fuser unit		
Thermostat, halogen lamp	Ensure that the heater control is properly exerted, and touch the fuser unit to confirm that it is hot. If it remains cold, confirm that the resistance between pin 1 and pin 6 of the connectors (2) measures from several Ωto several tens of Ω.	Replace the fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(11-2-2) Temperature rise of fuser unit		
Installed state of upper thermistor	Check to see if the upper thermistor is installed away from its prescribed position, causing the temperature to be measured low. Detach the heater cover, and check visually for warpage of the sensor, etc.	Replace the fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
Installed state of lower thermistor	Check to see if the lower thermistor is located away, whereas it should be in contact with the unit, causing a lower temperature than the prescribed one to be detected.	Replace the fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(11-2-3) AC input for halogen lamp		
AC voltage of low-voltage power supply	Check to see if the AC voltage for the heater is supplied normally. Between pins 1 and 2 and between pins 3 and 4 of the CN2 connector ㉔ of the power supply.	Replace the low-voltage power supply.
Heater-on signal delivered from PU to low-voltage power supply	Check to see if the heater-on signal turns active at the warming-up timing. "L" active while it is ON. Pin 11 and pin 12 of the POWER connector ⑩ of the PU PCB	Replace the PU PCB.

7.5.2.(12) Motor Fan Error(Error 120, 127, 051)

(12-1) Low voltage power unit fan or CU fan does not rotate right after turning on the power

Confirmation Items	Confirmation Tasks	Action at NG
(12-1-1) Connections and laying of cords		
Connections and laying of cords of low-voltage power supply fan, fuser fan and CU fan	Check to see if the connectors are properly connected. Check to see if the surplus portion of a cord is touching the blades of any fan	Redo the insertion of the connector. Modify the cord laying route. Replace the fan.

(12-2) DUPLEX fan does not rotate in DUPLEX printing

Confirmation Items	Confirmation Tasks	Action at NG
(12-2-1) Connection and laying of cord		
Connection and laying of Duplex fan cord	Check to see if the connector is properly connected. Check to see if the surplus portion of the cord is touching the blades of the fan.	Redo the insertion of the connector. Correct the cord laying route. Replace the fan.
24V fuse F501 of duplex PCB (V7Y PCB)	Check to see if the fuse F501 is blown out or not.	Replace the duplex PCB (V7Y PCB).
24V supply of duplex PCB (V7Y PCB)	Check to see if the fuse F3 of the PU PCB is blown out or not.	Replace the PU PCB.

(12-3) Every fan in the machine does not rotate

Confirmation Items	Confirmation Tasks	Action at NG
(12-3-1) 24V power supply		
Fuses F2 and F4 of PU PCB	Check to see if the F2 and F4 are open or not.	Replace the PU PCB.
24V power supplied to PU PCB	Check the power through the POWER connector of the PU PCB. Pins 4, 5, 6: 24V Pin 8: 0VL Pins 1, 2, 3: 0VP	Replace the low-voltage power supply.

7.5.2.(13) Print Speed is Slow (Low Performance)

(13-1) Print speed decreases

Confirmation Items	Confirmation Tasks	Action at NG
(13-1-1) Setting of Media Weight		
Media Weight specified for printing	Check to see if a wrong Media Weight is specified.	Correct the Media Weight.

7.5.2.(14) Option unit is not recognized

(14-1) Duplex unit is not recognized

Confirmation Items	Confirmation Tasks	Action at NG
(14-1-1) Duplex PCB		
Duplex unit	Check to see if the Duplex unit in use conforms to the printer.	Replace the Duplex unit.
(14-1-2) Check of connections		
Connections from PU PCB to Duplex PCB (V7Y PCB)	Check to make sure that the cord is properly connected from OPTION connector ⑬ of the PU PCB to the Duplex PCB.	Correct the connections.
Square connector connecting Duplex unit to the main body	Check to see if there is any foreign matter in the connecting part of the square connector.	Remove the foreign matter.
Square connector connecting Duplex unit to the main body	Check to see if the pins of the square connector are broken.	Replace the connector.
(14-1-3) Check of control signals		
Signals output from PU PCB to Duplex PCB (V7Y PCB)	Check the signals output from OPTION connector ⑬ of the PU PCB. 6pin: TXD (PU-> DUP) 4pin: RXD (DUP-> PU)	Replace the PU PCB.

(14-2) 2nd Tray unit is not recognized

Confirmation Items	Confirmation Tasks	Action at NG
(14-2-1) 2nd tray PCB		
2nd tray unit	Check to see if the 2nd tray unit in use conforms to the printer.	Replace the2nd tray unit.
(14-2-2)Check of connections		
Connections from PU PCB to 2nd tray PCB (V7Y PCB)	Check to make sure that the cord is properly connected from OPTION connector ⑬ of the PU PCB to the Duplex PCB.	Correct the connections.
Square connector connecting 2nd tray unit to the main body	Check to see if there is any foreign matter in the connecting part of the square connector.	Remove the foreign matter.
Square connector connecting 2nd tray unit to the main body	Check to see if the pins of the square connector are broken.	Replace the connector.
(14-2-3) Check of control signals		
Signals output from PU PCB to 2nd tray PCB (V7Y PCB)	Check the signals output from OPTION connector ⑬ of the PU PCB. 5pin: TXD (PU-> DUP) 3pin: RXD (DUP-> PU)	Replace the PU PCB.

(14-3) 3rd Tray unit is not recognized

Confirmation Items	Confirmation Tasks	Action at NG
(14-3-1) 3rd tray PCB		
3rd tray unit	Check to see if the 3rd tray unit in use conforms to the printer.	Replace the 3rd tray unit.
	Directly install the 3rd tray unit to the printer, and follow (14-2) to perform confirmation tasks.	

7.5.2.(15) LED head is not recognized(Error 131, 132, 133, 134)

(15-1) Service Call 131-134(LED HEAD Missing)

Confirmation Items	Confirmation Tasks	Action at NG
(15-1-1) Check of connections		
Connected state between CU PCB connector and head connector	Check visually the connected state of the FFC.	Redo the connection properly.
Head FFC	Unplug the FFC of the head, and check for any wire breakage or peel-off of the covering along the cord.	Replace the head FFC or CU PCB.
Check of Fuse conduction on CU board	Check voltage is 5V between capacitor CP7, CP8. (See 7.6)	Replace R190, R191(C8600) F504, F506(C8800) or CU PCB

7.5.2.(16) Toner cartridge is not recognized(Error 540, 541, 542, 543)

(16-1) Errors caused by consumables

Confirmation Items	Confirmation Tasks	Action at NG
(16-1-1) Installed state of consumables		
ID units and toner cartridges	Are the ID units installed in the right positions? Check to see if the lock levers of the toner cartridges are locked	Redo the installation properly.

(16-2) Errors caused by toner sensor

Confirmation Items	Confirmation Tasks	Action at NG
(16-2-1) State of toner sensor		
Toner sensor	Is the toner sensor lens stained with toner?	Wipe off the stain.
Toner sensor	Use the SWITCH SCAN function of the diagnostic mode to check to see if the sensor is normal. Hold a white paper in front of the sensor, and see if the SCAN state varies.	Replace the toner sensor PCB (PRZ PCB), PU PCB or the FFC between PRZ and PU PCB.

Note! How to check a toner sensor operation with SWITCH SCAN in the self-diagnosis mode.

(1) Confirmation of the operation in the device

1. Change to a display that a changing situation of the toner sensor is confirmed from the operation panel in the self-diagnosis mode.

   Refer to Section 5.4.2.3 Switch Scan Test as for how to display the operation panel.
2. When taking out an ID unit and toner cartridge (TC) from the device, there is a window on the observers' right from the device, in a position across to the side of the TC.

   In that window, a toner sensor is located.
3. Hold up a piece of white paper against a sensor in a place within 3mm from a sensor window.
4. The operation panel displays "L" if a piece of paper has light reflection and it displays "H" if not.
5. By holding up a piece of paper, if the operation panel changes "H"to "L" or "L" to "H", the device operates normally.

Response in NG:

- Clean a toner of the sensor surface and clear paper dust.
- Confirm a connection state of FFC cable between the toner sensor board (PRZ) and PU main board.
- Check an operation again and exchange PU main board or a toner sensor board (PRZ) if there is no change.

(2) Confirmation of the operation in Toner Cartridge (TC)

1. Install a TC and ID unit in a position where normal operation of the device has confirmed in Confirmation (1) and check operation in the operation panel.
2. The display of the operation panel changes "H" to "L" or "L" to "H" in conjunction with an action of TC white light reflector when operation of TC is normal.

Response in NG:

- Confirm an operation state of each ID motor by MOTOR&CLUTCH TEST in the selfdiagnosis mode.
- Clean the surface of the white light reflector at the side of TC. (Dirty from a toner or paper dust.)
- Exchange a TC of a different color and ID unit by the set.

  Exchange a TC or ID unit if the set of the different color is OK.

(16-3) Errors caused by machine defects

Confirmation Items	Confirmation Tasks	Action at NG
(16-3-1) Loading on ID unit		
ID Unit	Is a heavy load imposed on the ID unit, for example, because the waste toner belt was ruptured?	Replace the ID unit. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(16-3-2) Operating state of motors		
ID motor	Use the SWITCH SCAN function of the self-diagnostic mode to check to see if each ID motor operates normally. Make this checking in the presence and absence of a load.	Replace the PU PCB or the ID motor.

7.5.2.(17) Fuse Cutout Error (Error 150-155)

(17-1) Fuse cutout errors

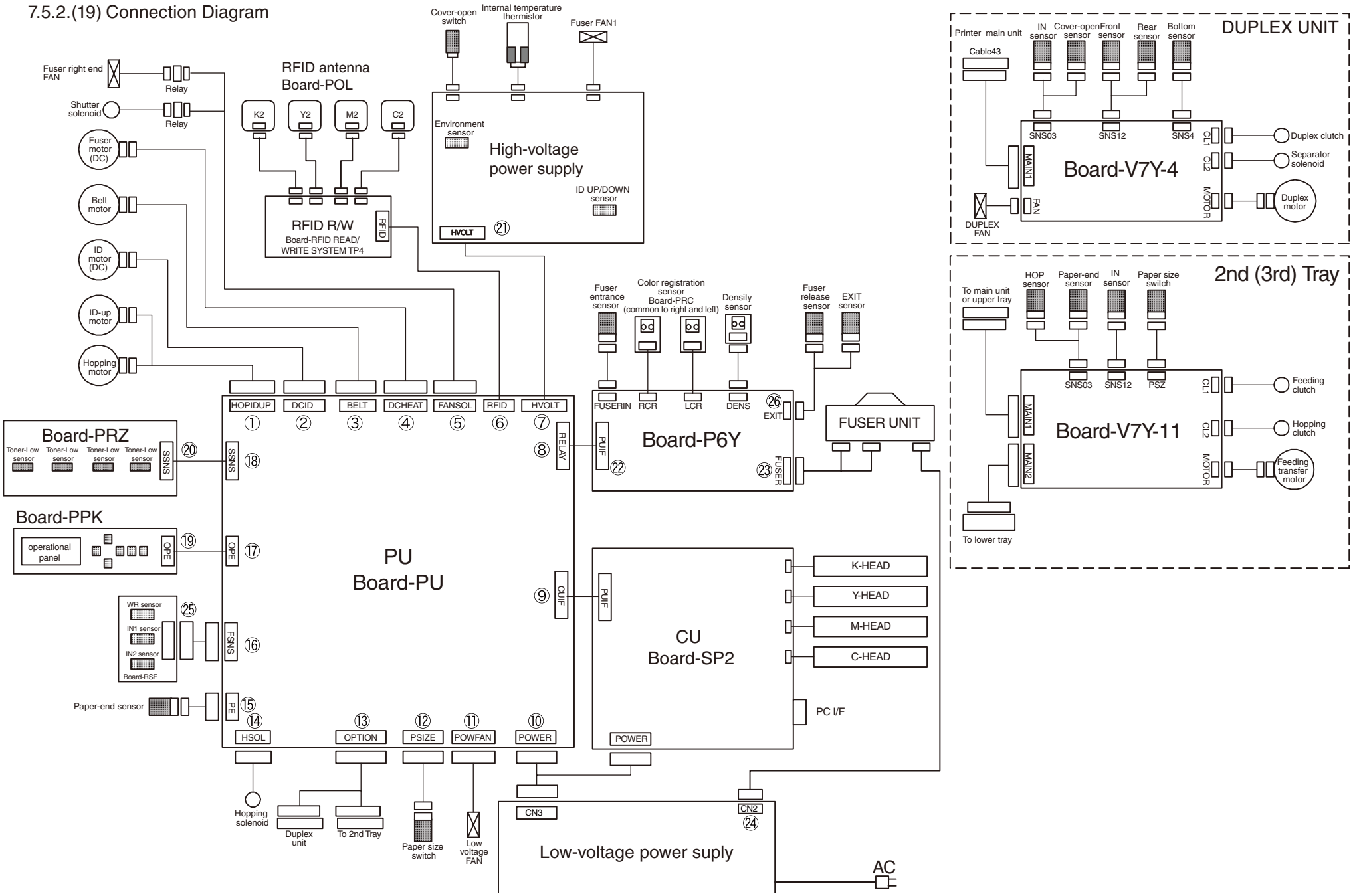
Confirmation Items	Confirmation Tasks	Action at NG
(17-1-1) Check of connections		
FFC interconnecting the PU PCB and the toner sensor PCB (PRZ PCB)	Check for any incomplete insertion or skew insertion of the SSNS connector ⑱ of the PU PCB and the SSNS connector ⑳ of the toner sensor PCB (PRZ PCB). Also check to see if the FFC has any wire breakage of peeloff of the covering.	Redo the connection of the FFC properly. Or, replace the FFC.
(17-1-2) Fuse-cut circuit		
PU PCB	After checking the connections, turn on the power again, and see if the error is issued again.	Replace the PU PCB.

7.5.2.(18) Dew Condensation Errors (Error 123)

(18-1) Dew Condensation

Confirmation Items	Confirmation Tasks	Action at NG
(18-1-1) Check of connections		
Connection between PU PCB and high-voltage PCB	Check to see if the 13-pin FFC is properly plugged into the HVOLT connector ⑦ of the PU PCB. Also check to see if the 9-pin FFC is properly plugged into the HVOLT connector ㉑ of the high-voltage PCB. Search for an imperfect connection or skew insertion.	Correct the insertion of the cord properly.
FFC interconnecting the PU PCB and the highvoltage PCB	Check for a wire breakage with a circuit-tester. Check visually for peel-off of the covering.	Replace the connector with a normal FFC.
(18-1-2) Environmental condition		
Heavy variation of environmental condition	Check to see if the environmental condition has changed from a low-temperature condition to a high temperature condition in a short time. (For example, the printer was moved from storage in a cold region to an office environment.)	Switch on the printer again after acclimatizing it to the new environmental temperature for one hour or so. Before turning on the power, touch the sheet metal of the controller panel on the back and internal sheet metals in order to see how the casing of the printer is warming up. Turn on the power again when much difference from the room temperature is no longer perceived

7.5.2.(19) Connection Diagram



7.5.3 Image Problem Troubleshooting

(1) Color is totally pale (Fig.7.2 A) 199
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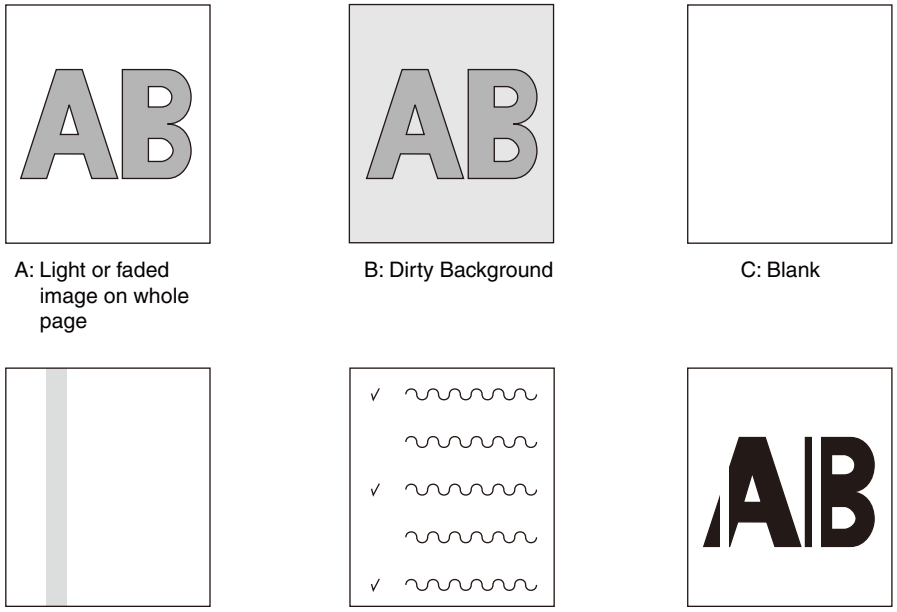
(8-1) Wrong setting in the limited color print menu. 203

Note! Read a content of EEPROM chip on the old board and copy it to a new board when exchanging a PU board.



A: Light or faded image on whole page

B: Dirty Background

C: Blank

D: Vertical black belt or line

E: Defective image of regular interval

F: Vertical white belt or line

Figure 7.2

7.5.3.(1) Color is totally pale (Fig.7.2 A)

(1-1) Color is pale

Confirmation Items	Confirmation Tasks	Action at NG
(1-1-1) Toner		
Remaining quantity of toner	Check to see if "ORDER TONER" or "REPLACE TONER" appears on the operator panel.	Replace the toner cartridge with a new one.
Tape at the opening of toner cartridge	Check to see if the tape placed at the opening of the toner cartridge has been removed or not	Close the lever of the toner cartridge, and peel off the tape from the opening.
(1-1-2) LED head		
LED head lens	Check to see if the lens surface of the LED head is stained with toner or paper chips.	Clean the lens with a soft tissue paper.
Installed state of LED head	Check to see if the LED head is properly installed in the LED head holder. Also check to see if the right and left tension springs are properly installed.	Correct the ins-tallation properly.
(1-1-3) Print media		
Type of medium	Check to see if the medium loaded in the printer is not something particularly thick.	Use the prescribed paper.
(1-1-4) High-voltage terminal		
ID unit terminal	Ensure visually that the high-voltage terminal of the ID unit is duly in contact with the contact ASSY (see Figure 7-3).	Replace the ID unit or modify the highvoltage terminal. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(1-1-5) Installed state of ID unit		
Lowest position of ID unit (Deficient transfer)	Draw out and insert the ID unit by hand repeatedly, and check to see if it is normally lowered to its lowest position free from any abnormal load. Not acceptable (NG) if the leading edge of a sheet of paper inserted in between the drum and the belt can readily be passed through.	Check the U-grooves of the side plates for any trouble. If the trouble is irreparable, replace the printer.

7.5.3.(2) Background is dirty (Fig.7.2 B)

(2-1) Background is dirty (partly)

Confirmation Items	Confirmation Tasks	Action at NG
(2-1-1) ID unit		
Drum exposed to light	Check to see if the ID unit has been left in an environment where its surface was exposed to light for a long time.	Replace the ID unit. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
Leak of toner	Check to see if toner is leaking from the ID unit or toner cartridge.	Replace the ID unit or toner cartridge. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(2-1-2) Fuser unit		
Offset toner of fuser unit	Check to see if the fuser unit has offset toner from the previous print job sticking.	Repeat idle printing by using waste medium, until the offset toner is exhausted to the print medium. Or, replace the fuser unit. To use a new fuser unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.

(2-2) Background is dirty (totally)

Confirmation Items	Confirmation Tasks	Action at NG
(2-1-1) ID unit		
Type of medium	Check to see if an especially thin medium is used for printing.	Use the prescribed paper.
(2-2-2) High-voltage terminal		
ID unit terminal	Ensure visually that the high-voltage terminal of the ID unit is properly in contact with the contact ASSY (see Figure 7-3).	Replace the ID unit or modify the high voltage terminal. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.

7.5.3.(3) Blank Print (Fig.7.2 C)

(3-1) Blank on the whole page

Confirmation Items	Confirmation Tasks	Action at NG
(3-1-1) State of toner		
Remaining quantity of toner	Check to see if a sufficient quantity of toner remains in the toner cartridge.	Replace the toner cartridge.
(3-1-2) State of exposure		
LED head	Check to see if the LED head faces the drum properly in the prescribed position when the cover is closed. Also check to see if there is something on the lightemitting surface of the LED head that obstructs the light emission.	Correct the installed position of the LED head.
Connected state of LED head	Check to see if the LED head is properly connected.	Replace the LED head.
Drum shaft	Check to see if the drum shaft is so mounted that it properly touches the right and left side plates.	Replace the ID unit. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(3-1-3) High-voltage terminal		
ID unit terminal	Ensure visually that the high-voltage terminal of the ID unit is properly in contact with the contact ASSY (see Figure 7-3).	Replace the ID unit or high-voltage PCB. Or, modify highvoltage terminal. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.

7.5.3.(4) Vertical lines are printed

(4-1) Thin vertical lines (with color) (See Fig.7.2 D)

Confirmation Items	Confirmation Tasks	Action at NG
(4-1-1) State of ID unit		
Filming of ID unit	Check to see if the print was conducted in the absence of toner.	Replace the toner cartridge with a new one. If still the error is issued, replace the ID unit. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.

(4-2) Thin vertical lines (without color) (See Fig.7.2 F)

Confirmation Items	Confirmation Tasks	Action at NG
(4-2-1) State of LED head		
LED head	Check to see if the LED head has any foreign matter sticking to the light-emitting surface of the SELFOC lens.	Remove the foreign matter.
(4-2-2) Running state of paper		
Path route	Check to see if there is a burr in the paper running path before fuser that scratches unfixed toner.	Remove the burr.

7.5.3.(5) Cyclic Print Trouble (Refer to Fig.7.2 E)

(5-1) Vertical cyclic print trouble

Confirmation Items	Confirmation Tasks	Action at NG
(5-1-1) Periodicity		
Image drum	Check to see if the periodicity is 94.3 mm or not.	Replace the ID unit.
Development roller	Check to see if the periodicity is 39.7 mm or not.	Replace the ID unit.
Toner supply roller	Check to see if the periodicity is 58.4 mm or not.	Replace the ID unit.
Charging roller	Check to see if the periodicity is 37.7 mm or not.	Replace the ID unit.
Roller on the fuser unit	Check to see if the periodicity is 87.7 mm or not.	Replace the fuser unit.
Fuser belt	Check to see if the periodicity is 125.5 mm or not.	Replace the fuser unit.
Transfer roller	Check to see if the periodicity is 50.3 mm or not.	Replace the belt unit.
		To use a new consumable part on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.

7.5.3.(6) Color registration is wide.

(6-1) "IN ADJUSTING COLOR REGISTRATION" is shown only a short time

Confirmation Items	Confirmation Tasks	Action at NG
(6-1-1) Color registration result		
Color registration time (Approx. 40 sec if normal)	Execute REG ADJ UST TEST in the self-diagnostic mode, and check the result. Any error issued is not displayed if the ONLINE indication is on.	Replace the sensor that originated NG. Clean the sensor. Replace the shutter. Replace the PU PCB.
(6-1-2) Toner		
Remaining quantity of toner	Check to see if "ORDER TONER" or "REPLACE TONER" is displayed on the operator panel.	Replace the toner cartridge with a new one.
(6-1-3) Color registration sensor		
Dirty sensor	Check to see if the sensor has toner or paper chips sticking.	Wipe off the dirt.
(6-1-4) Color registration sensor shutter		
Defects of the shutter operation	Check the shutter operation in the self-diagnostic mode.	Replace the shutter or modify the mechanism.

(6-2) Although REG ADJUST TEST of the engine maintenance function is OK, Color drift is seen

Confirmation Items	Confirmation Tasks	Action at NG
(6-2-1) Paper feed system		
State of paper feed system of running route	Check to see if there is anything on the paper feed route that hinders the paper from running.	Remove the obstacle.

7.5.3.(7) Solid Black Print

(7-1) Solid black on a full page

Confirmation Items	Confirmation Tasks	Action at NG
(7-1-1) High-voltage contact state		
CH terminal	Check visually from above to see if the terminal extending from the printer is properly in contact with the high-voltage terminal on the left side of the ID unit.	Replace the terminal of the printer side.
CH terminal	Check to see if the high-voltage terminal remains in normal contact on the high-voltage PCB. Remove the high-voltage PCB by opening the left cover, and check to see if the terminal is abnormally installed	Redo the installation of the terminal properly.
ID unit terminal	Ensure visually that the high-voltage terminal of the ID unit is properly in contact with the contact ASSY (see Figure 7-3)	Replace the ID unit, high-voltage PCB, or modify the highvoltage terminal. To use a new ID unit on a trial basis, use FUSE KEEP MODE of the System Maintenance Menu.
(7-1-2) State of high-voltage output		
CH output	If a high-voltage probe is available among the maintenance tools, open the left cover, and check the CH output with the high-voltage probe through the solder side of the high-voltage PCB while the machine is printing. (The high-voltage probe is not an ordinary maintenance tool.)	Replace the high-voltage PCB.

7.5.3. (8) Cannot Print

(8-1) Wrong setting of Limited color print menu.

Confirmation Items	Confirmation Tasks	Action at NG
(8-1-1) State of Limited color print menu		
ADMIN MENU Item	Check that, “CUSTOM PROCESS” setting value of the ADMIN MENU ITEM is set to FULL COLOR. (Refer to Section 5.6 for ADMIN MENU)	Change to FULL COLOR.

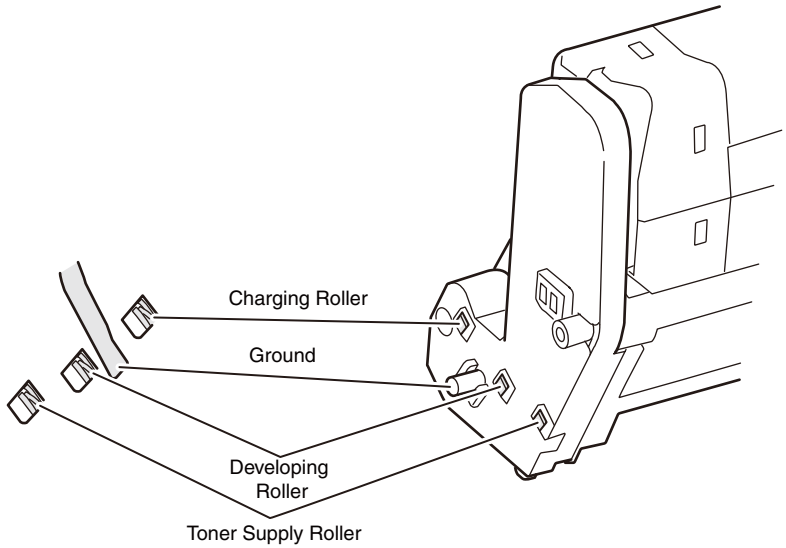


Figure 7.3

7.5.5 Network Troubleshooting

(1) Cannot print from Utility.

Confirmation Items	Confirmation Tasks	Action at NG
(1) Check of LINK light		
Check to see if the LINK light (green) is on.	Check to see if the HUB and the printer are properly linked. (Check to see if the network cable is properly connected.)	Redo the connection of the network cable.
	Check to see if a straight cable is in use.	Replace the cable with a straight cable.
	Insert a Network cable to a different HUB port.	Replace the HUB.
(2) Check of network information		
Check to see if network information can be printed correctly.	Press the Push-SW of the NIC card to print the network information.	Rewrite NIC-F/W with the utility.
(3) Check of contents of network information		
Check the IP address, SUB-net mask and gateway address.	Check an IP address, Subnet mask, Gateway address printed on Network information.	Set an IP address, Subnet mask, and Gateway address correctly.
(4) Check to see if communication can be held through the network.		
Check to see if a Ping command can be sent from the PC to the printer.	Confirm if correct reply is returned from a printer to a PC when the PC sends the Ping to a printer.	Set an IP address, Subnet mask, Gateway address correctly
(5) Check of Utility		
Check the settings of the OKILPR Utility.	Check the set items of the OKILPR Utility.	Set the set items of the OKILPR Utility correctly.
(6) Check through standard OS port		
Check the standard LRP port conforming to the WINDOWS standard (NT, 2000, XP).	Set the standard LPR port conforming to the WINDOWS standard (NT, 2000, XP), and see if print can be executed.	Set the standard LPR port conforming to the WINDOWS standard (NT, 2000, XP) correctly.

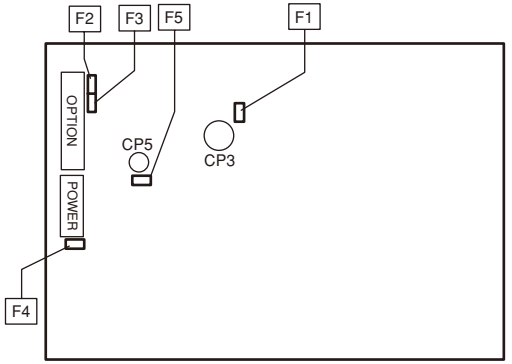
7.6 Check of fuses

If any of the following errors is issued, check the corresponding fuse on the CU control PCB (SP2 PCB), PU control PCB or high-voltage power supply PCB. (See Table 7-6.)

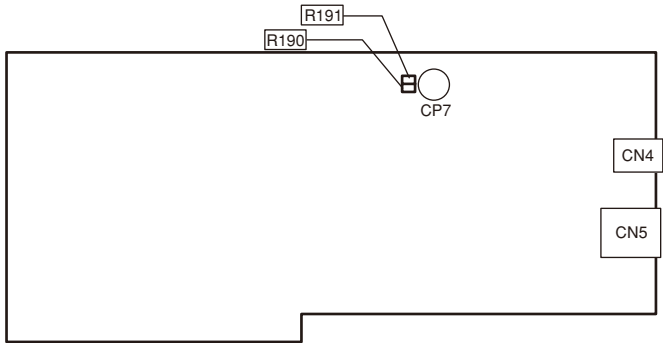
Table 7-6 Fuse Error

Fuse Name		Error Description	Insert Point	Resistance
PU PBC	F1	Hopping Error ID-up/ down error	Feed motor, IP up/down motor, 24V High voltage, fan, update Ver.	1Ω or less
	F2	Power supply fan error Hopping error	Power supply fan, paper feed solenoid, 24V	
	F3	Duplex FAN error 2nd hopping error 3rd opping error	Duplex, 2nd, 3 rd 24V	
	F4	Cover open	Belt motor, High-voltage PBC 24V	
	F5	Power interruption	PU PBC 5V	
High Voltage	IP901	Cover Open	High voltage 24V	
	IP902	Service Call Error 121	High voltage 5V	
CU control PCB (SP2 PCB)	R190 R191	R190:Service Call 131,134 R191:Service Call 132,133	LED HEAD 5V	

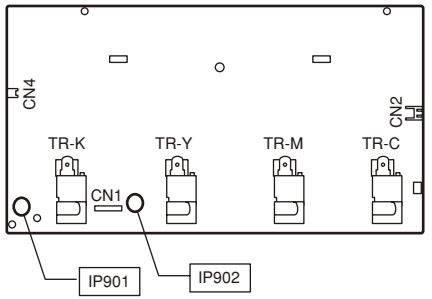
PU control PCB component side



CU control PCB component side



High-voltage power supply PCB component side



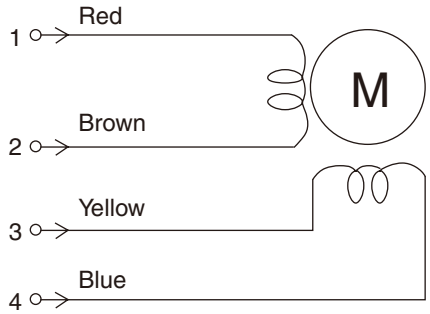
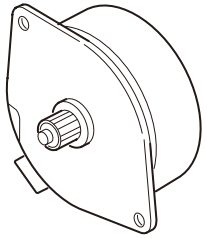
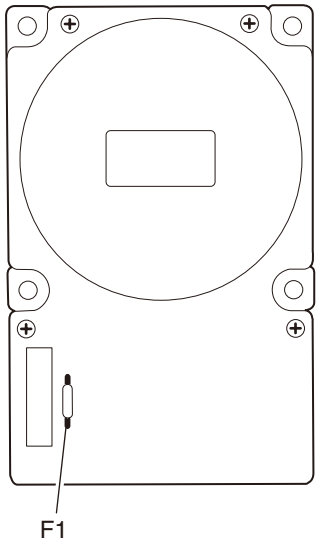
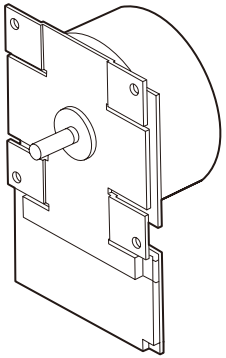
7.7 Paper cassette switches versus Paper size correspondence table

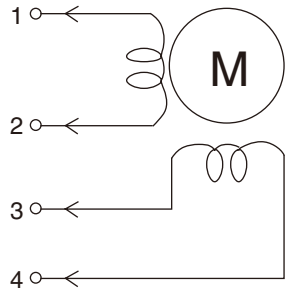
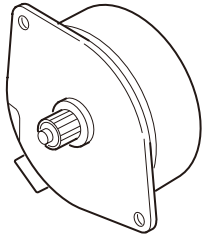
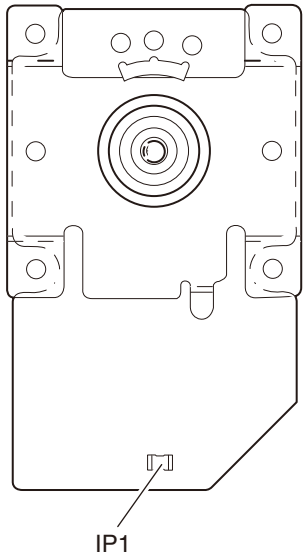
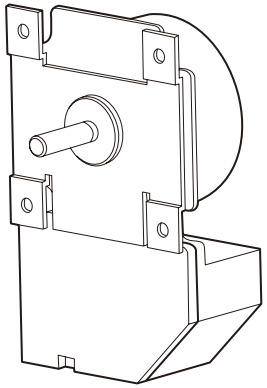
Bit No.				Dial Indication Size (OEL)		Dial Indication Size (ODA)	
1	2	3	4	TRAY1	TRAY2/3	TRAY1	TRAY2/3
H	H	H	H	No cassette	No cassette	No cassette	No cassette
L	L	L	L	A4	A4	A4	A4
H	H	L	L	A6 SEF		A4 SEF	A4 SEF
L	H	L	L	A5 SEF	A5 SEF	A5 SEF	A5 SEF
L	H	H	L	LTR LEF	LTR LEF	LTR LEF	LTR LEF
H	H	H	L	Tabloid	Tabloid	LTR SEF	LTR SEF
H	L	H	L	B5 LEF	B5 LEF	Tabloid	Tabloid
H	L	H	H	B4	B4	LEGAL	LEGAL
L	L	L	H	A4 SEF	A4 SEF	EXEC	EXEC
L	L	H	L	A3	A3	A3	A3
L	L	H	H	Reserved	Reserved	Reserved	Reserved
L	H	L	H	Reserved	Reserved	Reserved	Reserved
H	H	L	H	Reserved	Reserved	Reserved	Reserved
H	L	L	H	Reserved	Reserved	Reserved	Reserved
L	H	H	H	Reserved	Reserved	Reserved	Reserved
H	L	L	L	Reserved	Reserved	Reserved	Reserved
Press of SW: L							

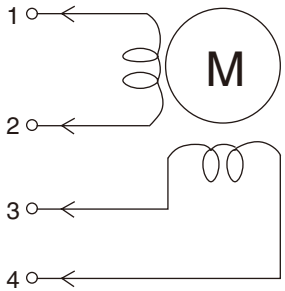
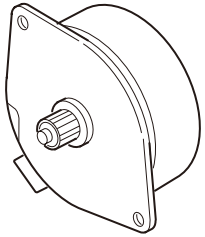
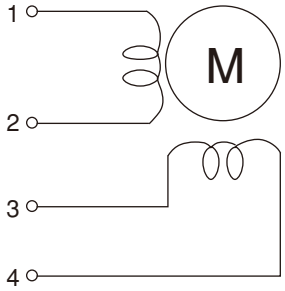
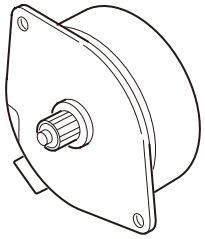
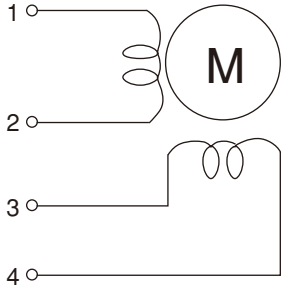
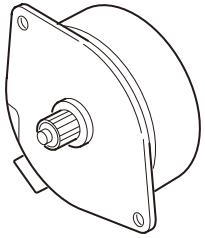
8. CONNECTION DIAGRAMS

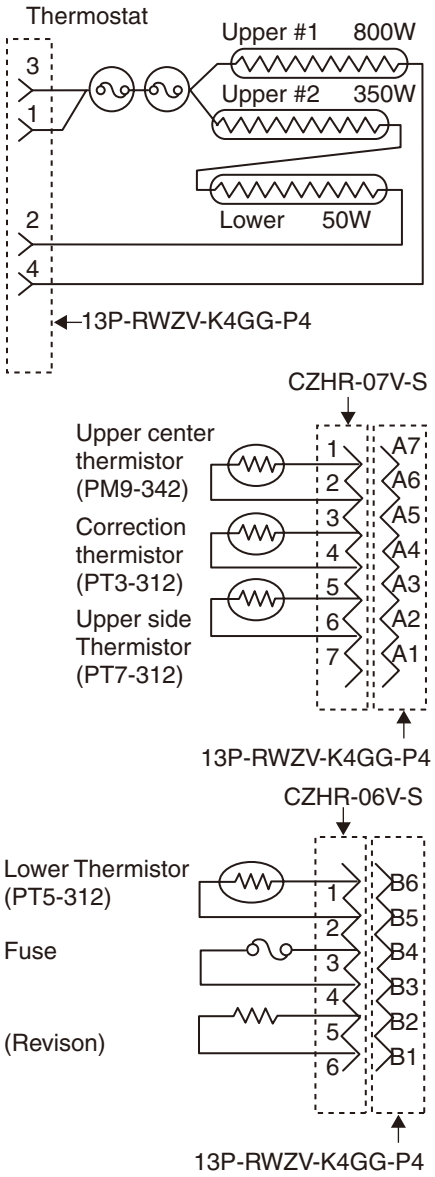
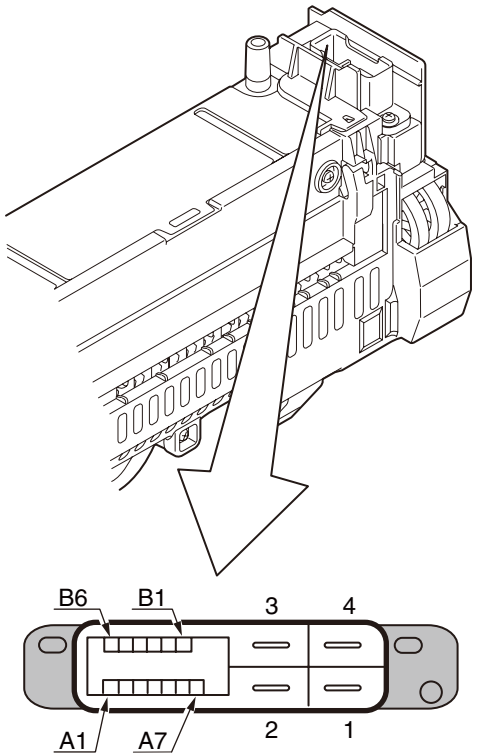
8.1 Check of resistance values 208
8.2 Component layout 212

8.1 Check of resistance values

Unit	Circuit diagram & Configuration	Part schematic	Resistance value
Transport belt motor			Between pin 1 and pin 2: 3.4Ω Between pin 3 and pin 4: 3.4Ω
ID motor			Both ends of F1: 1Ω or less

Unit	Circuit diagram & Configuration	Part schematic	Resistance value
ID up/ down motor			Between pin 1 and pin 2: 6.1Ω Between pin 3 and pin 4: 6.1Ω
Fuser unit motor			Both ends of IP: 1Ω or less

Unit	Circuit diagram & Configuration	Part schematic	Resistance value
Feed motor			Between pin 1 and pin 2: 3.4Ω Between pin 3 and pin 4: 3.4Ω
Duplex motor			Between pin 1 and pin 2: 2.4Ω Between pin 3 and pin 4: 2.4Ω
2nd tray feed motor			Between pin 1 and pin 2: 3.4Ω Between pin 3 and pin 4: 3.4Ω

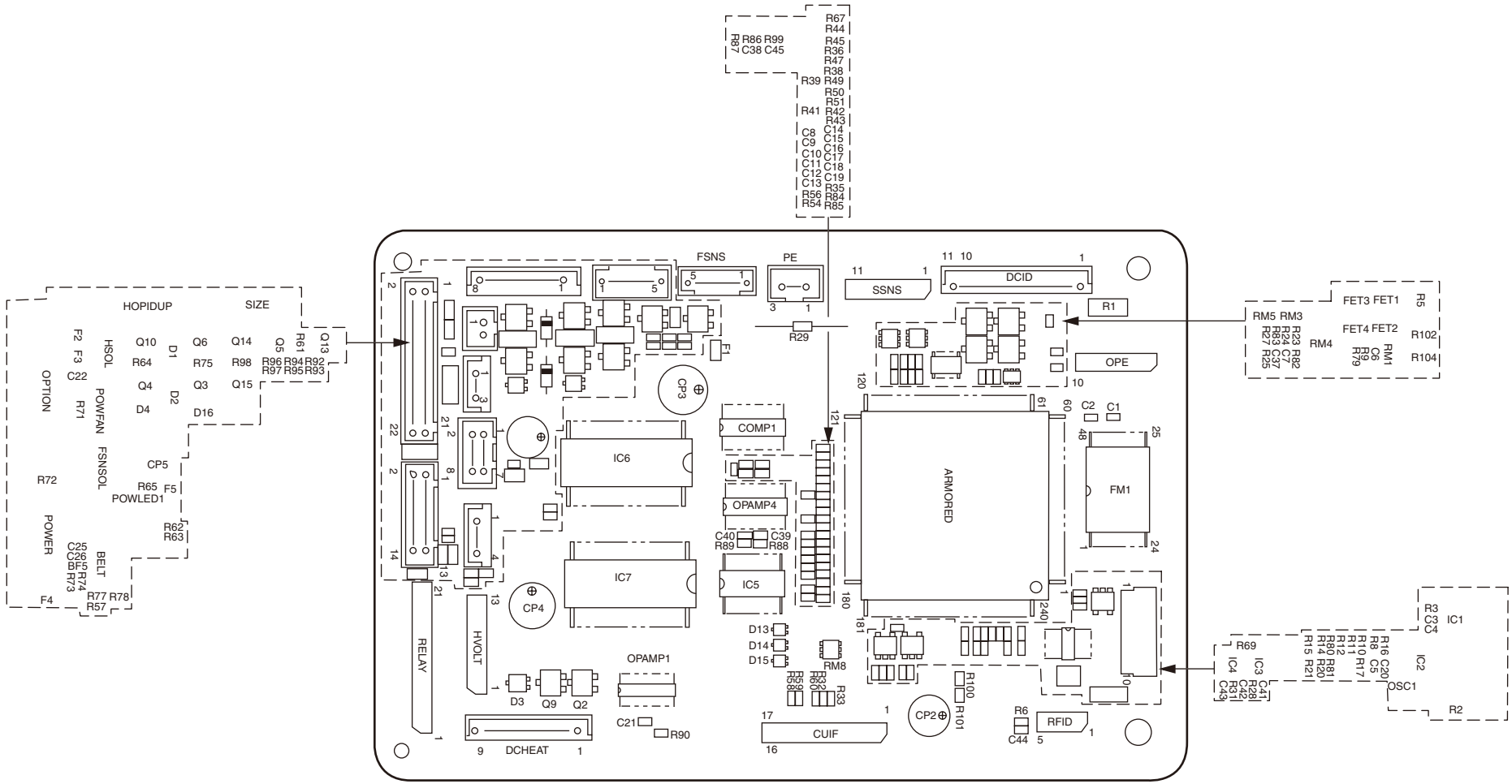
Unit	Circuit diagram & Configuration	Part schematic	Resistance value
Fuser Unit			Upper center thermistor Between pins A-6 and A-7: Approx. 8058 k to 5338 k Ω (0 to 93°C) Upper side thermistor Between pins A-2 and A-3: Approx. 104.5 k to 806.5 k Ω (0 to 43°C) Lower thermistor Between pins B-5 and B-6: Approx. 104.5 k to 806.5 k Ω (0 to 43°C) Correction thermistor Between pins A-4 and A-5: Approx. 104.5 k to 806.5 k Ω (0 to 43°C)

8.2 Component layout

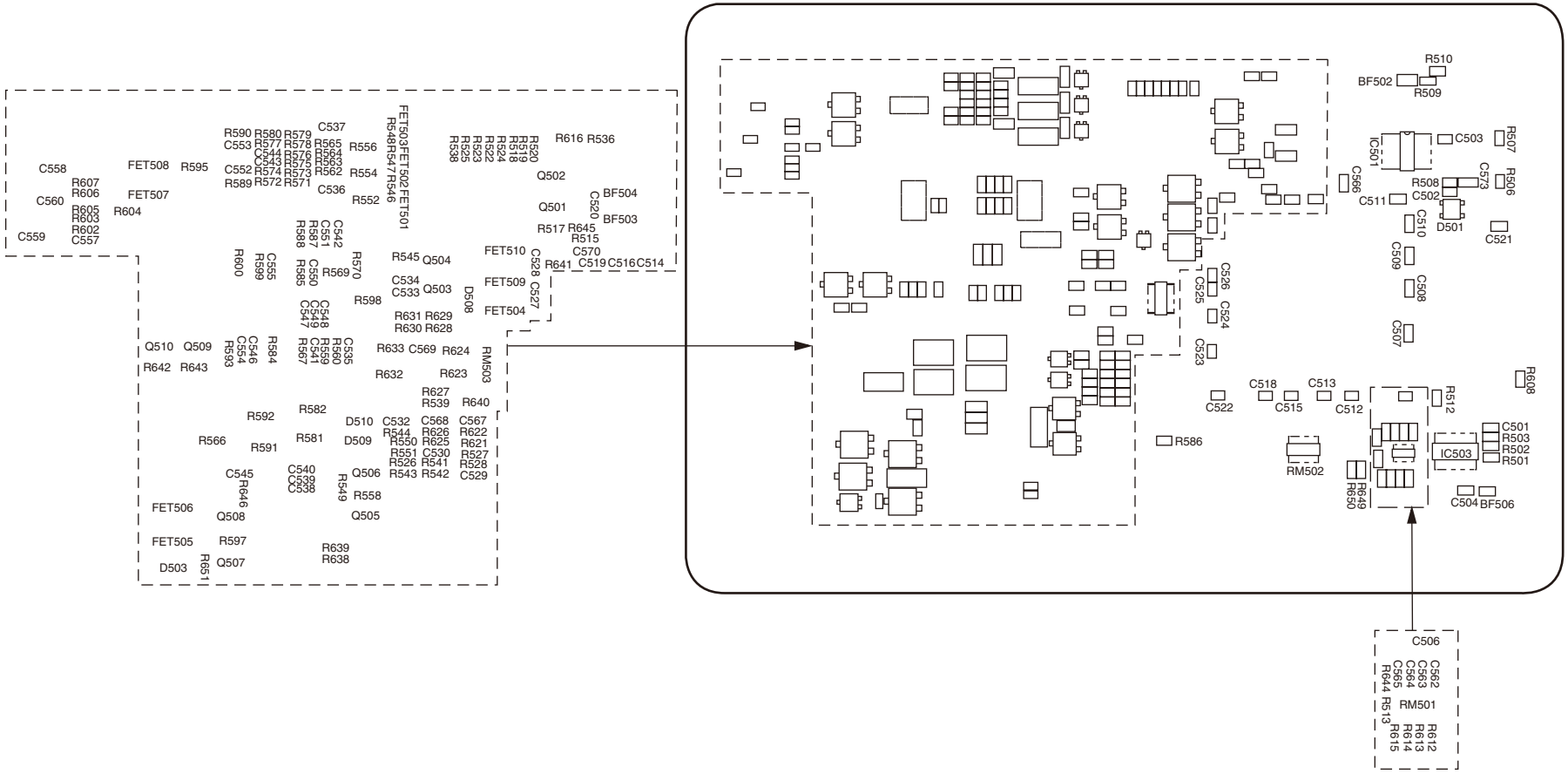
(1) Print engine controller PCB (PU PCB)

*Component side

Component side



Solder side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R607
R606
C560
FET507
R605
R603
R602
C559
C557
R604
C537
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C553 R577 R578
C544 R576
C543 R575
R574 R573
R572 R571
C552
R589
R556
R554
R552
C536
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R538 R525 R523 R522 R524 R518 R519 R520
R616 R536
Q502
Q501
C520
BF504
BF503
R517 R645
R515
C570
C519 C516 C514
R641
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C547
C549
R631 R629
R630 R628
Q510 Q509
R642 R643
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C554
R593
R584
R567
C535
C560
C549
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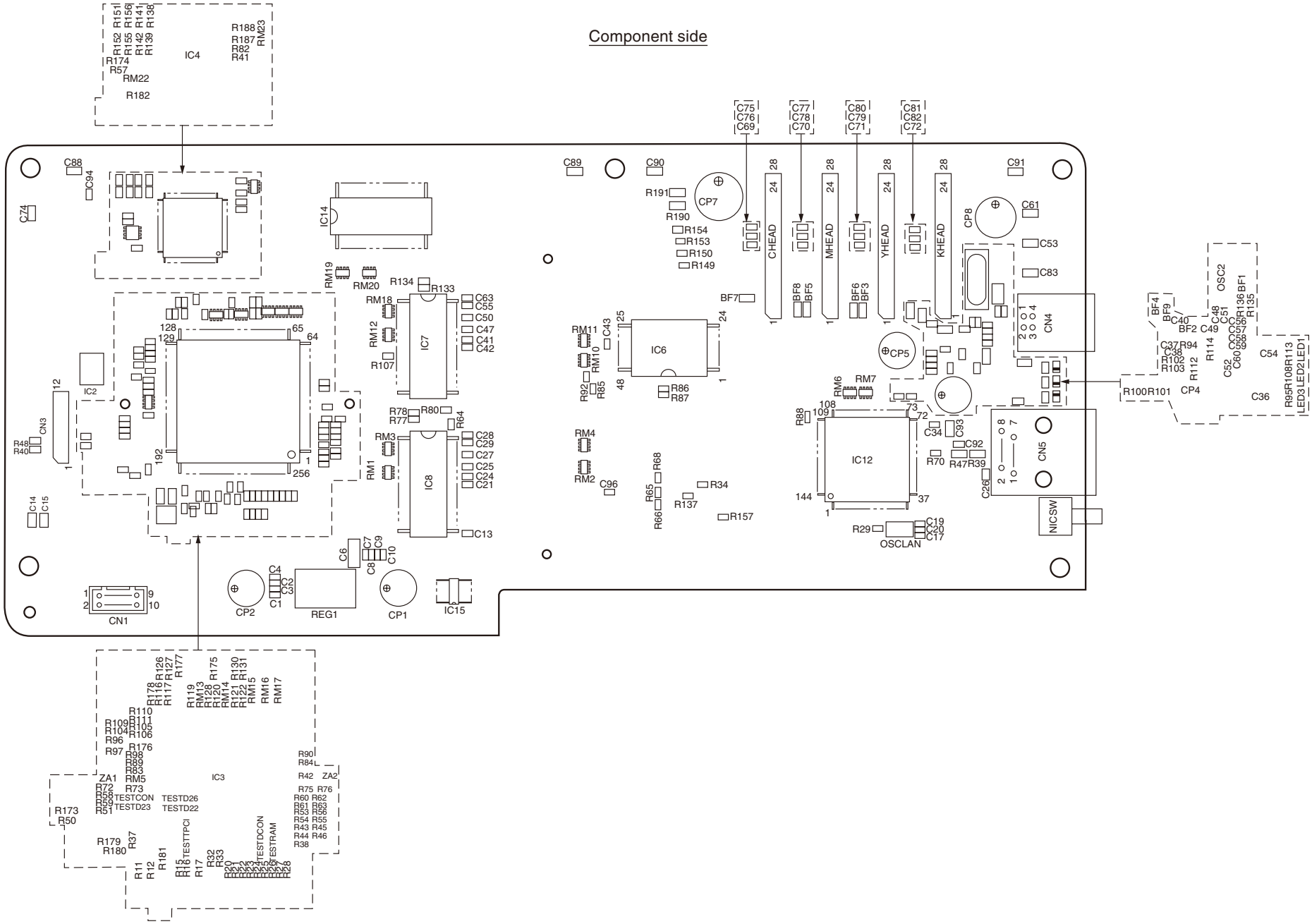
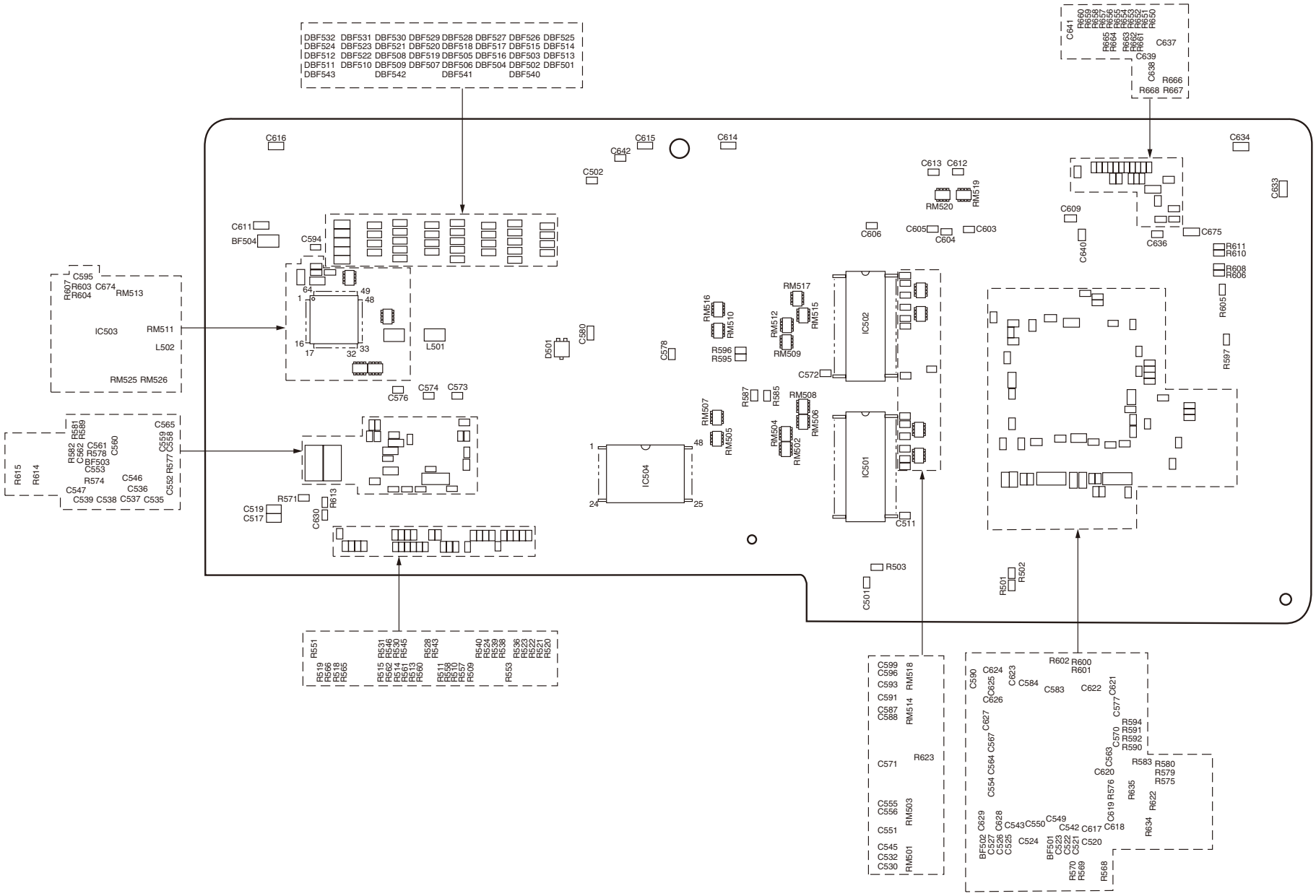
RM503
R632
R623
R627
R539
R640
R592
R582
D510
C532
C568
C567
R544
R626
R622
R566
R591
R581
D509
R550
R625
R621
R551
C530
R527
R526
R541
R528
C545
C540
C539
C538
Q506
R543
R542
C529
R549
R558
R646
FET506
Q508
Q505
FET505
R597
D503
R651
Q507
R639
R638
R510
BF502
R509
IC501
C503
R507
C566
C573
R506
R508
C511
C502
C510
D501
C521
C509
C508
C507
C526
C525
C524
C523
R608
C518
C513
C522
C515
C512
R512
R586
RM502
C501
R503
R502
R501
IC503
R649
R650
C504
BF506
C506
C562
C563
C564
C565
R644
RM501
R513
R612
R613
R614
R615

(2) Main controller PCB (SP2 PCB)

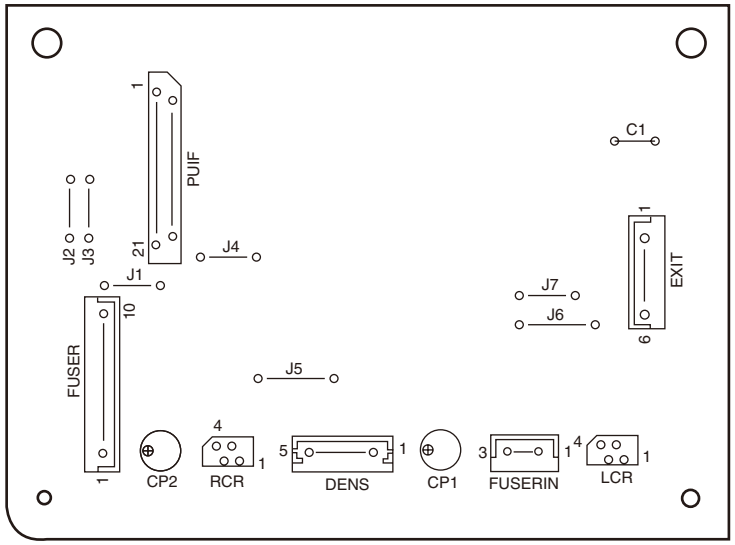


Solder side

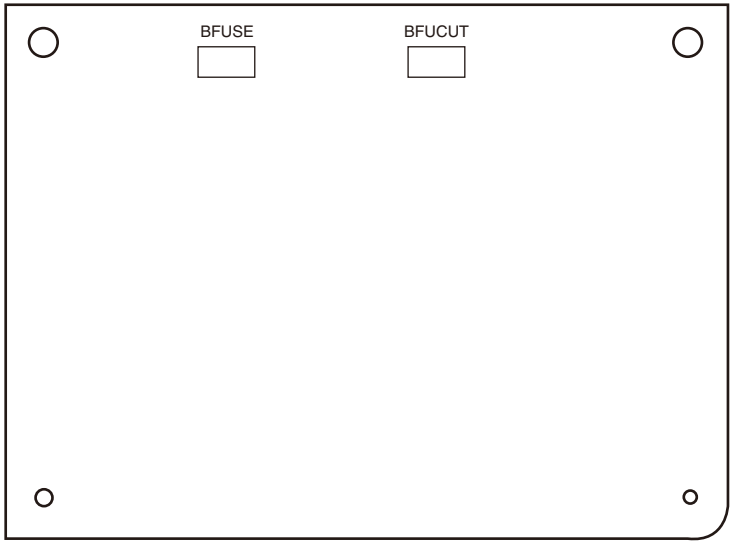

DBF532 DBF531 DBF530 DBF529 DBF528 DBF527 DBF526 DBF525
DBF524 DBF523 DBF521 DBF520 DBF518 DBF517 DBF515 DBF514
DBF512 DBF522 DBF508 DBF519 DBF505 DBF516 DBF503 DBF513
DBF511 DBF510 DBF509 DBF507 DBF506 DBF504 DBF502 DBF501
DBF543 DBF542 DBF541 DBF540
C641 R660 R659 R658 R657 R656 R655 R654 R653 R652 R651 R650
R665 R664 R663 R662 R661
C637 C639 C638 R666 R668 R667
C616 C615 C614 C642 C502 C634 C633
C613 C612 RM519 RM520
C611 BF504 C594 C606 C605 C604 C603 C609 C640 C636 C675
R611 R610 R608 R606 R605 R597
C595 R607 R603 R604 C674 RM513 IC503 RM511 L502 RM525 RM526
64 49 1 48 16 17 32 33 L501
D501 C580 C578 RM516 RM510 RM512 RM515 RM517 RM509 R596 R595
IC502 C572 C576 C574 C573
R587 R585 RM508 RM507 RM505 RM504 RM502 RM506
IC504 1 48 24 25 IC501 C511
C565 R581 R589 R582 C562 C561 R578 C560 C559 C558 C557 R577 C552
R615 R614 BF503 C553 R574 C546 C547 C536 C539 C538 C537 C535
R571 C519 C517 R613 C630
R503 C501 R501 R502
R551 R519 R566 R518 R565 R515 R562 R514 R561 R513 R560 R531 R546 R530 R545 R528 R543 R511 R558 R510 R557 R509 R540 R534 R539 R538 R536 R553 R523 R522 R521 R520
C599 C596 C593 C591 C587 C588 RM518 RM514 C571 R623 C555 C556 RM503 C551 C545 C532 C530 RM501
R602 R600 R601 C590 C624 C625 C626 C623 C584 C583 C622 C621 C577 C627 C567 C564 C554 R594 R591 R592 R590 C570 C563 R583 R580 R579 R575 C620 R576 R635 R622 C619 C618 R634 C629 C628 C543 C550 C549 C542 C617 C527 C526 C525 C524 BF501 C523 C522 C521 C520 R570 R569 R568

(3) Junction PCB (P6Y PCB)

Component side

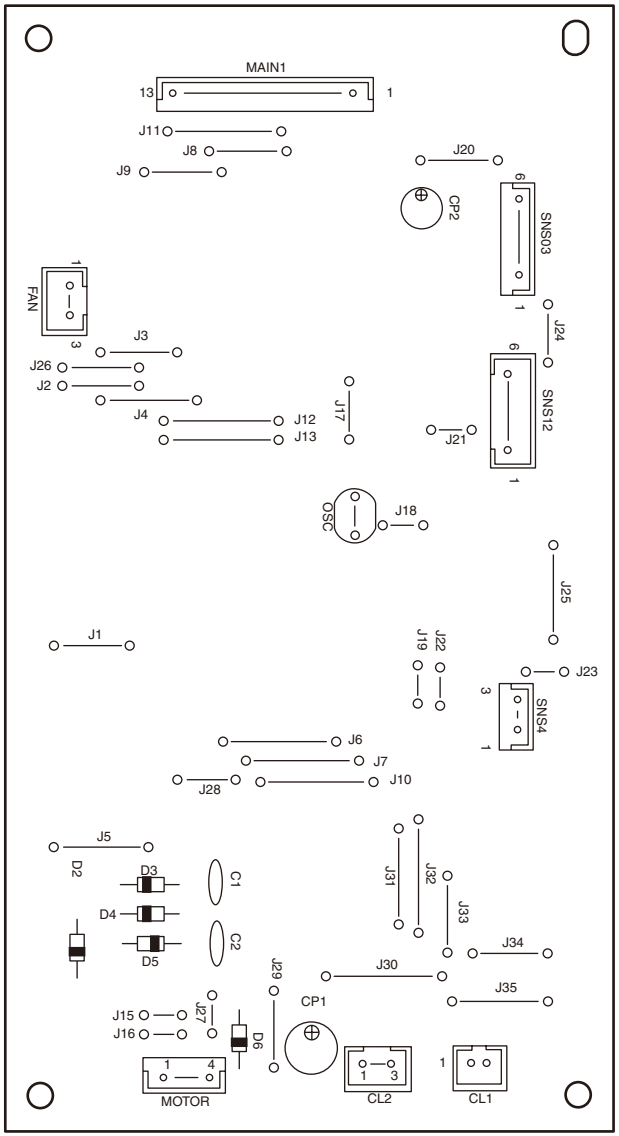


Solder side

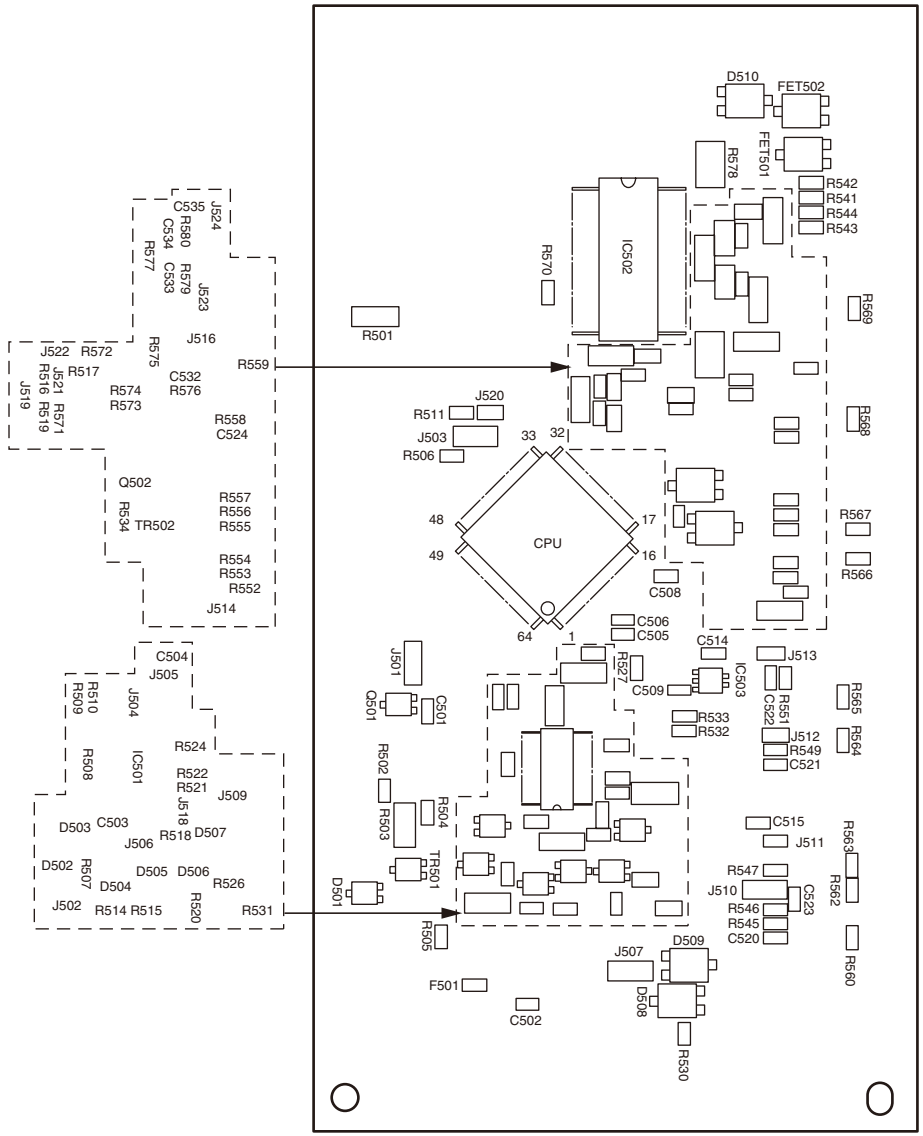


(4) Duplex print control PCB (V7Y-4 PCB)

Component side

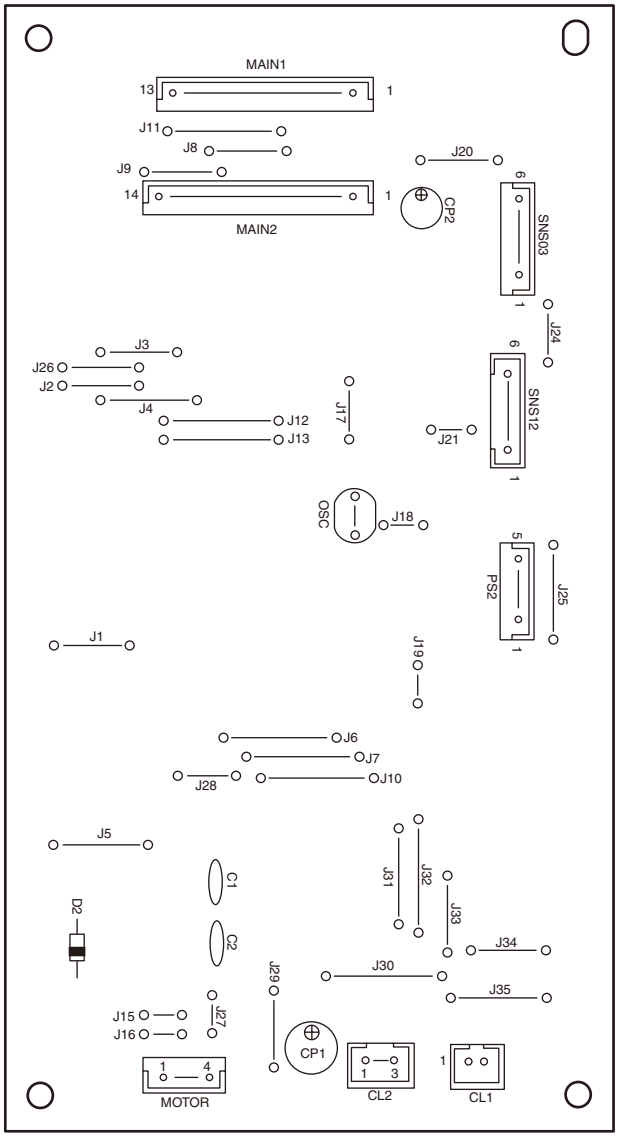


Solder side

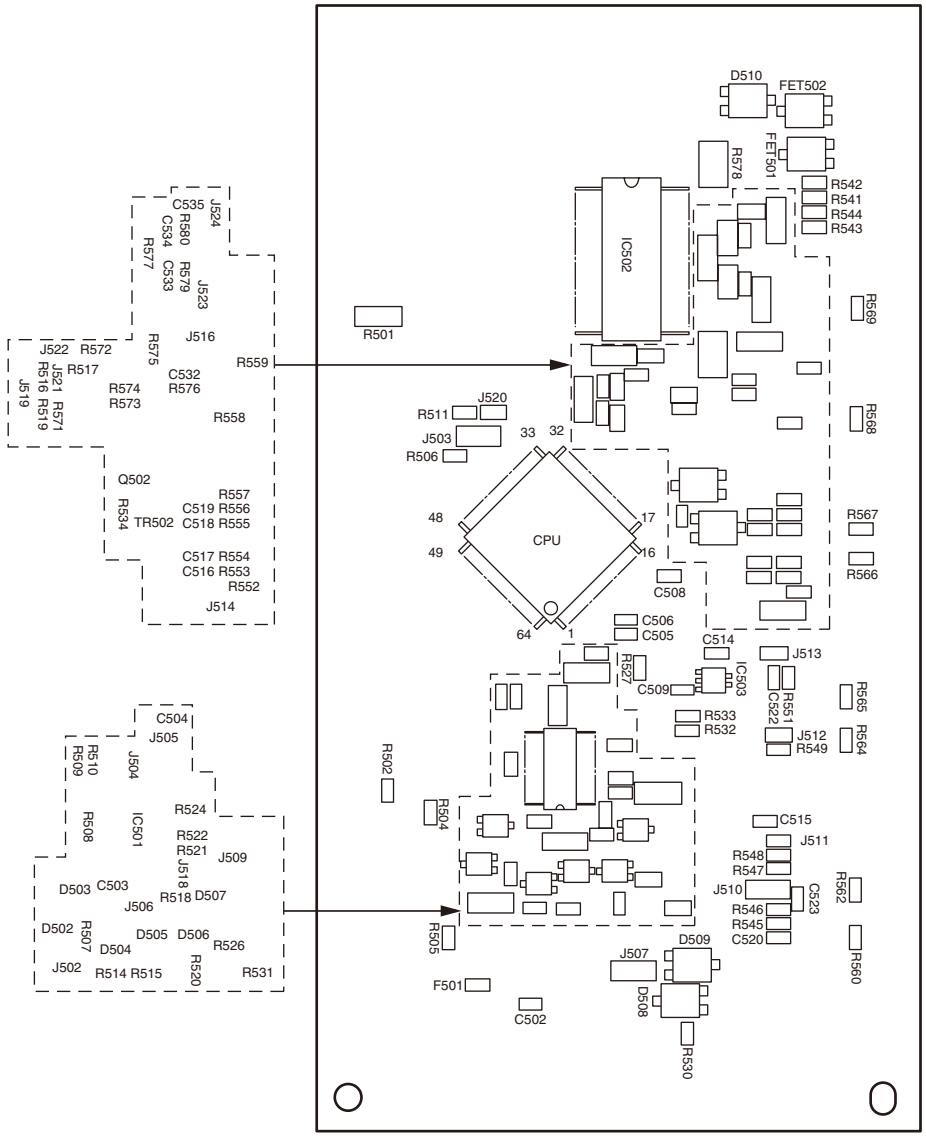


(5) Second tray control PCB (V7Y-3 PCB)

Component side

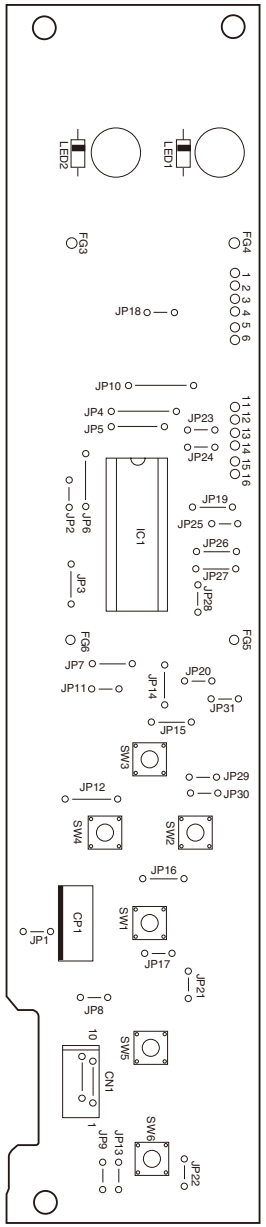


Solder side

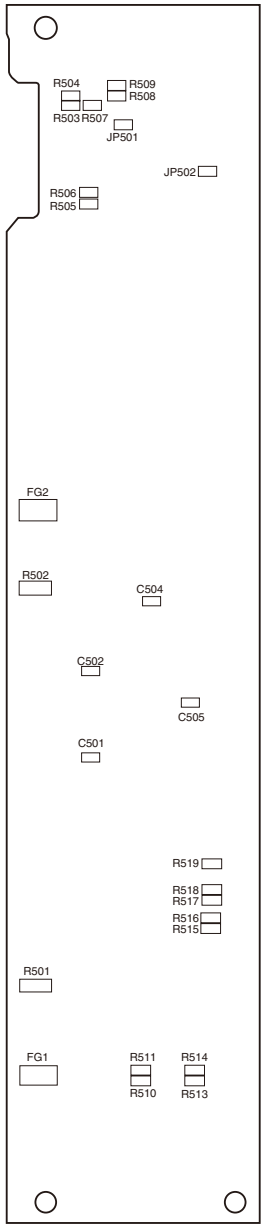


(6) Control panel PCB (PPK PCB)

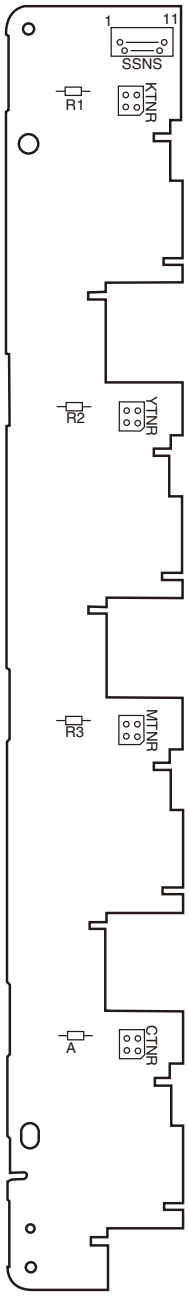
Component side



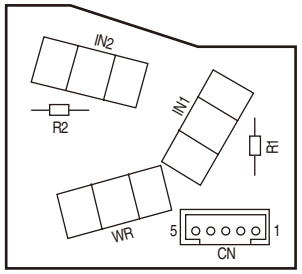
Solder side



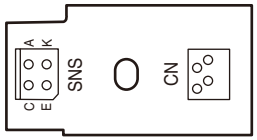
(7) Toner-Low sensor PCB (PRZ PCB)



(8) Inlet sensor PCB (RSF PCB)

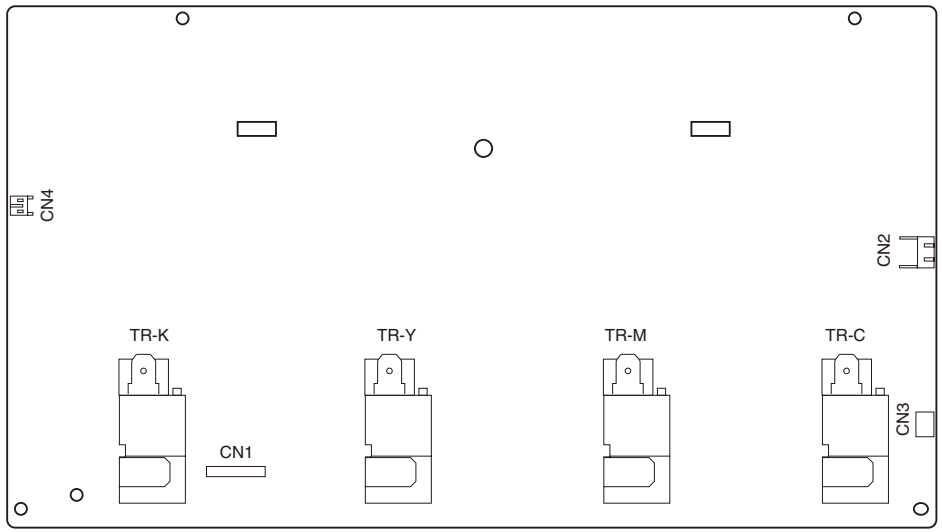


(9) Color adjustment sensor PCB (PRC PCB)

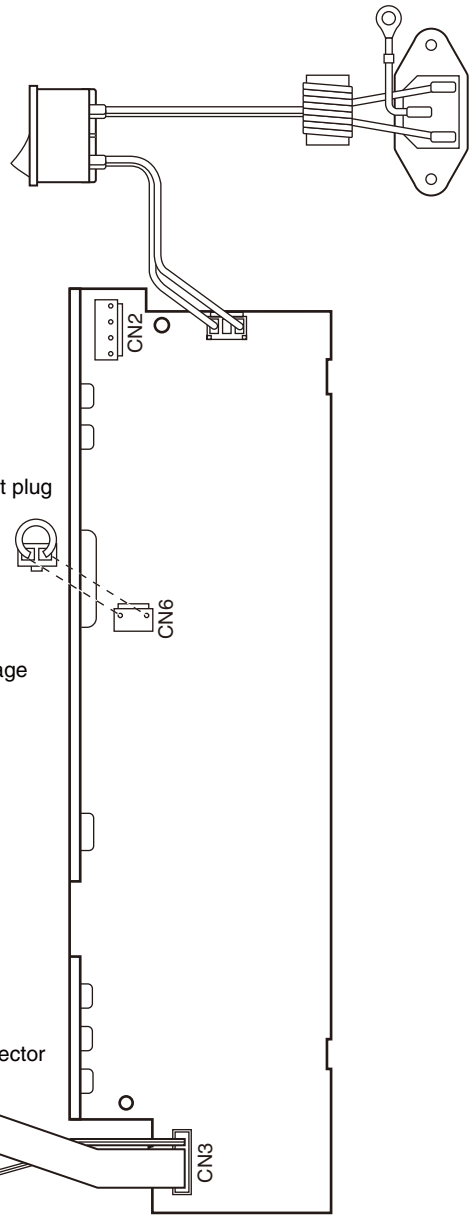


(10) High-voltage power supply PCB

*A specified part number depends on RSPL.



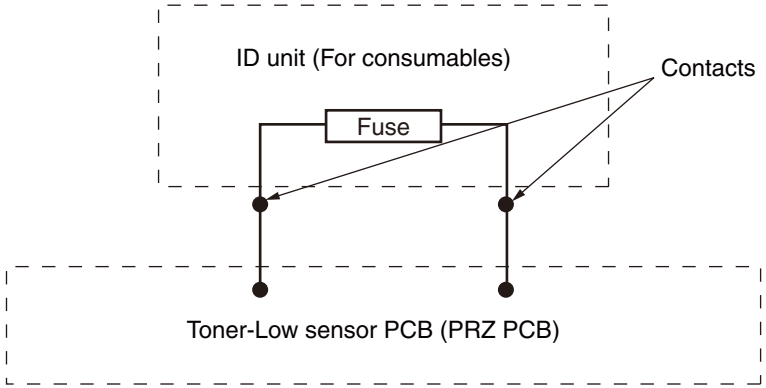
(11) Low-voltage power supply PCB

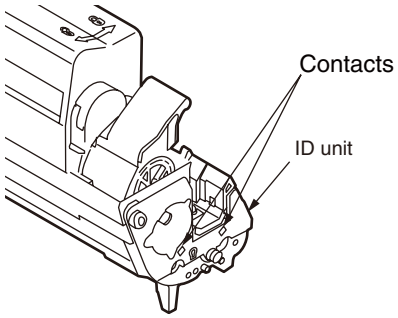


Notes!

CN6: Connector for switching AC input voltage setting.
Short-circuit plug installed for 120-V system/Short-circuit plug not installed for 230-V system

(12) ID Unit





(13) Transfer belt unit